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Suggestions for Improving the Horse Industry of the West.

The following is the text of a letter that has been sent to the Hon. Sydney Fisher, Dominion Minister of Agriculture, by C. W. Peterson, secretary of the Territorial Horse Breeders' Association:—

I am directed by the executive committee of the Territorial Horse Breeders' Association to call your attention to the fact that, although over one hundred thousand head of horses and mules have been purchased in the United States, and a considerable number in Eastern Canada, for use in the South African campaign, for which satisfactory prices were paid, no attempt has apparently been made by the War Office authorities to secure any portion of this enormous number of re-

general farming or cattle raising can never be successfully prosecuted therein. Such being the case, it necessarily follows, that these enormous areas must eventually be devoted, if utilized at all, to the raising of horses, or, in the more favorable localities, to sheep raising. It is, therefore, clear that the business of horse raising must perforce ultimately develop into one of the most important branches of agriculture in the west. But, even if these circumstances were not in themselves sufficient to bring horse breeding operations prominently to the front in the Territories, the local conditions are such, that no horse producing country in the world could successfully compete against our cheap pastures, rich in lime, and favorable climate, enabling horses to range out winter and summer, at little or no expense to the owner.

The present position of affairs is simply unbearable, and I am directed by my committee to urge you, as emphatically as lies in my power, to come to the rescue of our breeders in some way. The market for heavy draught horses is all that could be desired at present, but the conditions here are not nearly so favorable to the production of this class of horses as to the

ish War Office, with a view to having a purchasing officer sent out, as soon as your department had gathered a sufficient number of horses, to inspect them and select all those coming up to the army standards.

There would, doubtless, be a certain number of culls, no matter how carefully the horses had been purchased; but those would, in centres like Toronto, Montreal, or Ottawa, in most cases, be worth nearly as much as your department paid for them, and if the prices offered Territorial breeders for their animals were fixed at their approximate value for army purposes, less the cost of transportation and other expenses (which would still leave a very satisfactory figure), it is unlikely that any considerable loss would be sustained by your department in the whole transaction. Any trifling debit balance would, of course, be amply justified by the impetus which would be given horse breeding operations in the Territories.

Even granting that the necessary financial arrangements could be made to enable this association to successfully handle such a scheme itself, it could not hope to do so as economically and efficiently as it could be done by the Federal Government. You have in the

Manitoba Cattle for the Range.

By Andrew Graham, Pomeroy, Man.

I notice in late issues of The Farming World that the eastern breeders are making tremendous efforts to capture the trade of supplying pure bred stock, more particularly bulls, to the Territories west of us. The old adage that far-away fields look green, still holds good to a certain extent, but western ranchmen are finding out that bulls secured from Manitoba breeders are a very much safer investment than those from Ontario. It is a well-known fact that the best of Ontario's young bulls have been either carried off by the Americans or selected to head herds in Ontario and Manitoba, and in many cases little else than what should be called culls have found their way to our western ranges. In moving about among the smaller breeders in Ontario, one is frequently impressed with the inferior character of a portion of the breeding stock kept. Some of these herds have been established largely with the weeds from the larger herds and weeds they continue to be. There is at least a score of pro-



Round-Up Camp, showing Riders, Mess Wagon, Grub Tent and Cook.

mounts in the Territories, in spite of the fact, that both the western contingents, which left Canada for service in South Africa, were mounted entirely on western horses, and that it has not been satisfactorily established that any difficulty was experienced in obtaining a sufficient number of a satisfactory type, although the notices given the rancher in both instances were entirely inadequate, owing to the hurried preparations.

It is well known to western breeders, and the fact is deeply deplored, that the impression evidently prevails in Eastern Canada, that there are not enough horses raised in the Territories as yet, for any practical purposes. This impression, however, is entirely erroneous. It is true that during the years of low values, breeding operations were largely discontinued, but it is also a fact, that the absolute want of a remunerative and stable market for horses of certain standard types, is not alone working a distinct hardship upon a vast number of small breeders, but it is also exerting a most baneful influence upon the development of the horse industry here, as it effectively discourages breeding operations. No person will, for any length of time, expend money and labor, upon high class breeding stock, without a reasonable assurance of ultimate satisfactory financial returns from his efforts.

Vast portions of the Northwest Territories present such topographical, meteorological and soil conditions, that

raising of light horses, and it is particularly in connection with the latter that government assistance is needed.

After devoting considerable thought to the matter, I am directed by my committee to suggest, as a feasible means of putting this industry on a proper footing, that your department should deal with it somewhat on the same basis as has been adopted in respect to the dairy industry in the Territories. An amount of money might be appropriated at the forthcoming session of parliament, sufficient to enable you to purchase, as an experiment, a limited number of horses in the west, conforming to the cavalry, artillery and mounted infantry standards, at a fair minimum price. At least two months' notice should be given to breeders here of the dates and places where your agent would purchase, and also full information respecting the types of horses required, and to what extent they should be handled. The association would undertake to look after the local organization, advertising, etc., and would otherwise render your department every assistance possible. Ample notice is absolutely essential, as horses are usually ranging out, and it takes considerable time to get them in and properly handled. This will not, under ordinary circumstances, be done until there is a sale in sight. Three months' notice would be better than two. In the meantime, negotiations could be opened up with the Remount Department of the Brit-

person of the Live Stock Commissioner an official well fitted to do the organization work required. At every considerable point in the Territories there is a Mounted Police Divisional head-quarters, where assistance could be obtained in purchasing, holding and shipping these animals, and where an experienced veterinarian, in the employ of your department, would be available. In fact, the cost of handling the scheme, in the hands of your department, could be reduced to a mere minimum.

It is anticipated, that if an arrangement such as outlined could be continued for five or six years, under a government guarantee, the production of military remounts in the Territories would easily double, and if proper representations were made to the Imperial Government, based upon actual knowledge of the number of suitable horses available annually and the record for endurance and constitution which western horses would by that time undoubtedly have made for themselves in the service, it should prove a feasible proposition to induce the War Office authorities to establish regular Remount Depots at various points throughout the west, such as are now maintained in the Argentine Republic by the British Government in connection with the Indian Army.

In conclusion, I am to express the hope, in behalf of my committee, that its representations may meet with favorable consideration at your hands.

minent breeders of Shorthorn cattle in Manitoba whose large herds will compare very favorably with the best herds to be found in the east. The best young bulls, as well as the heifers, can be secured from these herds by western customers at prices quite as low as is often paid for the culls from the eastern herds, and owing to being already acclimated, are likely to prove far more satisfactory.

Our breeders should take up the question of supplying breeding stock to the west at our February convention and see to it that everything possible is done in the way of securing improved transportation facilities. While we are not likely to be able to compete with the east in the production of agricultural machinery and many other lines of goods, we can produce as high a quality of pure-bred stock as in any other portion of the world. A living, active interest in these questions by our new Minister of Agriculture would be of great service to the stock interests.

Local shippers in the middle Western States are adopting a new plan of selling horses. Instead of having horse sales in the large centres, they are this winter taking their horses to the districts where the supply is short and selling there. In all instances where this has been done the prices realized are reported as being very satisfactory.

The Time to Invest.

One of our prominent and well-known swine breeders writes us that, notwithstanding the high prices being paid at the present time for swine products, he has recently castrated nearly a dozen pure-bred boars. These pigs were well advertised and could have been purchased at a very slight advance on pork values. They were a very choice lot, and some of them were old enough for service. It does seem peculiar that so many farmers will persist in breeding from scrub sires, when pure-bred ones of the choicest breeds and breeding can be had at very reasonable prices. No doubt the immediate cause of the shrinkage in the demand for young sires is the scarcity of money on the farm, owing to the short wheat crop last year. But we would like to ask farmers if this is not the time to invest rather than not? If breeders are finding it difficult to dispose of their stock, is it not a good time for farmers to buy? Aside from this, owing to the adverse past season, the supply of hogs in the country is undoubtedly small—fewer will be bred, and the man who goes ahead now will reap a good harvest while hogs are high, before every one starts again. In this work the use of pure-bred sires will help increase the profits. This is looking at the question from the farmers standpoint. But there is also a view for the breeder who is feeling the pinch of hard times now, in that there is less demand for his young sires. The knife used judiciously may be the means of greatly improving the herd. Save only the best, cull out the worst and pay more attention to selection in breeding. Continued prosperity and ability to sell all he breeds may lead a breeder to think he can sell anything, regardless of its quality. If adversity teaches him to select and strive to produce the best, then he will make greater progress for a set back. Having got a clearer view of what he wants, should the breeder not prepare for the increased demand that is sure to come when farmers have good crops again? We think so.

High Prices for Hogs.

Ontario farmers have been making good money out of their hogs this year and the men who had a large number to dispose of are particularly pleased. The large increase in the number of hogs grown by the average farmer is one thing that strikes a visitor to the province. In districts where a few years ago only enough hogs were raised to supply the need of the family on each farm, there are now 60 and 70 being turned off annually. The experience gained in handling these is paving the way step by step for better things. Special pasture is being arranged for summer feeding, so as to grow the pork as cheaply as possible and an acreage of roots for winter feeding.

Discussing the present high prices for hog products, the manager of the Wm. Davies Co., of Toronto, said that prices are no higher than the conditions in England warrant at the present time. Wiltshire bacon, the special kind cured by Canadian packers, is now in great demand and packers cannot get hogs enough.

Farmers in Manitoba should take a leaf out of their Ontario brothers' book in the way of hog producing. With a small acreage for pasture and coarse grains for feed greater returns can be obtained per acre by feeding hogs than in any other way. To reach the highest returns, effort has to be made to market the hogs somewhat between seasons, i.e., between the usual fall and spring rushes of hogs which always send the price down. There is no stock a farmer can get into quicker than into pigs and none he can make more money out of, if rightly handled.

Breeding the Useful.

In a recent letter in the Times, Sir Walter Gilbey calls attention to the fact that, as a nation, too much attention is devoted by the British people to breeding pedigree horses, such as hunters, steeplechasers, polo ponies, etc., to the neglect of what is known upon the continent as "useful" types of horses. There is much truth in the charge, not only in England, but in America also. This is a practical age. In all industrial lines the trend is to produce something practical and useful; why not in horse breeding? In breeding cattle, sheep and hogs the trend is more and more influenced by the requirements of the butcher's block. Fancy points, that have no value whatever to the butcher, but which please the breeder, do not receive the same attention at the hands of breeders that they used to do. This is common-sense—practical sense. Then why not follow the same line of action with our horses. True, we do with heavy horses for draft purposes, but do we get them heavy enough? Have we studied the best form for draft? For the butcher's block we want the flesh laid on in greatest quantity in those portions which bring the highest price. Do we attach equally as much importance to having the muscles needed in pulling a load fully developed in a draft sire, or are we content with mere all-round size or bulk? Some of the continental European nations have concentrated their energies in breeding a class of horses which upon the whole possess most truly useful qualities. These nations have been helped in working to a type by the demands made for military purposes. As Canadians, we have had no such help in steadying our breeding, and every man has gone his own sweet way. Could we get remount purchasing stations established in various parts of Canada, we would have a leavening influence that would work for fixity of type and, we think, greater all-round excellence as well. Our ideas on the kind of horses to breed want shaking up. We must pay more attention to the horse that is useful—in every sense of the word.

A Judging Pavilion.

The Farmer is in full accord with a motion, passed at the annual meeting of the Canadian Jersey Breeders' Association, asking the Toronto Industrial association to erect a pavilion at the cattle ring for the accommodation of those interested in the judging of cattle. It is a wonder that Toronto has not had something of this kind before. Winnipeg Industrial has a bench running round the live stock ring, but this could be extended with great advantage at both ends, where the crowd gathers to watch the judging of the horses and cattle respectively. While on this question, would it not be a good idea for the live stock associations to take up this subject and see what could be done, not only to secure better seating, but to have a pavilion erected, where lectures could be given on live stock subjects with animals in the ring, to illustrate the ideas of the speaker. Lectures of this sort were a feature of the Winter Show at Guelph that was most successful. A class room was provided, with seating capacity for 300, but was not nearly large enough to hold the crowds that wanted to see and hear what was going on. Farmers are after information, and we believe that such a series of lectures or addresses would have more attraction for farmers than the performance in front of the grand stand. There is no reason why the live stock and dairy associations, in conjunction with the farmers' institute system, should not be able to arrange a series of afternoon talks in such a pavilion that would be a big drawing card to any exhibition.

W. H. Robinson, Wapaha:—"I must say that I am well pleased with The Nor'-West Farmer. I think that every prairie farmer should take it."

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JOHN TURNER, "Bonny Brae Farm," breeder of Polled Angus Cattle. Young stock of both sexes for sale. John Turner, Carroll, Man.

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Under this heading will be inserted advertisements of farm properties, farm machinery, etc., for sale and exchange, farm help wanted, articles wanted and other lines of miscellaneous advertising.

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For Sale—All Section 17-15-17. Really good for mixed farming, all wire-fenced. Furnishes pastures, corrals, yards, gardens, lawns, good bluff. Pretty situation—two miles from school and churches, four miles from Minnedosa, seven miles from Franklin. Good eight roomed house, framed and painted; two good wells, with pump house; milk house, granary, poultry house, piggery, stables for 80 head, 120 acres broken (40 last year); could break 300 acres more, 80 acres wood; 100 loads of hay cut yearly. I wish to sell everything and go into raising pigs and poultry only. Thomas Over Mellor, Minnedosa, Man. 2-8

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Having a large connection amongst many of the foremost breeders in Great Britain, I guarantee to supply pure-bred Horses, Cattle, Sheep and Pigs of any British breeds for exhibition or breeding purposes on the most favorable terms. Satisfaction guaranteed. Prices on application. P.O. Box 483.

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More About Beef Making.

In our short notice of the International Fat Stock Show at Chicago, held early in December, we noted that in the various competitions our neighbors of the Minnesota Agricultural College had about the best of the game. The contest between the leading agricultural colleges was a new feature in live stock competitions, and as we expected, was one of the most interesting of the whole. It is one thing to go lecturing at institutes, big and little, about how things should be done, and a rather different thing to step into the ring and do it yourself. There is still a considerable number of farmers, some of them could even be found in Manitoba, who think it a good joke to be invited to go from home, perhaps a dozen miles, on a cold winter day, to hear a city farmer discourse on cows and crops and how to rear and feed colts and good beef cattle. If the book farmer says anything worth hearing, there are very few "practical farmers" so stubborn as to refuse him ample commendation for all he has to say. But, when the lecturer starts into the same line of business himself, stays with the job till it is finished, and his work is placed before severely impartial judges for their final verdict, the test of his fitness to teach other men is complete, and his triumph, if he wins fighting against "foemen worthy of his steel," is all the more gratifying to himself and his friends. This is precisely why the Clay-Robinson portion of the competitions at that great show are of interest to all who favor modern agricultural teaching.

The very great success of the Minnesota Agricultural College in that competition is of special interest to us in the Canadian Northwest for two reasons:—

1. The kind of feed supplied to the prize winning cattle from that college was of a kind almost identical with what we ourselves can raise in profusion. Ten years ago, when John Gibson, now of Denfield, Ontario, had charge of the splendid collection of stock on the farm of President J. J. Hill, he was feeding both for beef and milk, a strictly Canadian style of ration, and his success was noteworthy. From that farm went beef cattle fit to win championships at Chicago against all the States of the Union. The rations on which the beef cattle of the Minnesota College were able to go to the top of the list at Chicago were made up on similar lines.

2. The chair of Animal Husbandry is filled by an ex-Canadian, Professor Thomas Shaw, and his manager, Geo. Craig, is an old Manitoban, well known in the early days of Binscarth Farm, and also for some time at Brandon Experimental Farm. We have more than a suspicion that one or two of the victorious cattle are also of Canadian origin.

It is not a question of cost altogether, when such high honors are to be won. Nobody sits down to charge up against a steer, that wins a \$50 prize and afterwards sells for much more than his beef value, the exact cost of his feed and care. But it is important that we should know how the thing was done, and how far we can go along the same lines if we want to succeed in similar work. Our old friend, Geo. Craig, has just supplied, through the columns of the Farm Students' Review, published at the college, an outline of his methods of feeding and their results. It may be as well to give here a full list of the awards won at the Chicago Fat Stock Show by the animals sent there from the Minnesota College. There were classes open to all and some that were confined to the rival colleges alone. The winnings of Minnesota were as follows:—

FOR CATTLE.

In classes open for all.

Shorthorn steer calf.—1st prize, \$60.
Grade yearling steer—4th prize, \$10.
In the Clay-Robinson contest, for agricultural colleges only:—

Yearling steer—2nd prize, \$30.
Yearling steer—3rd prize, \$20.
Calves—1st prize, \$50.
Calves—2nd prize, \$30.
Calves—3rd prize, \$20.
Best five head of steers or spayed heifers, \$100.

Before going on to describe the feeding of the prize cattle, we may give a list of the honors won in other departments of the same show.

IN CLASSES OPEN TO ALL.

Southdown yearling wether — 1st prize, \$15.
Champion Southdown wether—\$25.
Tamworth sow, under one year—1st prize, \$12.
Tamworth sow, under one year—2nd prize, \$8.
Champion Tamworth sow—\$20.
Pen 5 barrows, 250-350 lbs.—1st prize, \$25.
Pen 5 barrows, 250-350 lbs.—3rd prize, \$10.
Pen 5 barrows, 200-250 lbs.—3rd prize, \$10.
Pen 5 barrows (bacon), 150-225 lbs.—2nd prize, \$15.
Champion pen, 5 barrows—\$25.

In the Clay-Robinson contest, for agricultural colleges only:—

Yearling wether—1st prize, \$30.
Champion wether—\$40.
Barrow, under 1 year old—1st prize, \$30.
Barrow, under 1 year old—3rd prize, \$10.



Stockers from Manitoba at Moose Jaw, Assa.

Champion barrow—\$40.
Best general exhibit—\$200.

The five cattle that won the group prize for young animals were fed on the farm for eight months. Their feeding was not done on any formal rule, but was left very much to the discretion of George Craig, the stock manager.

The yearlings were fed mainly on ground oats and bran, hay and green feed during spring and summer, till about the middle of August, when a little corn meal was added, and the amount gradually increased till about one-third by weight was given.

It will be noticed that the feed given was mainly nitrogenous in character, especially during the early period. This is necessary to produce nice quality of flesh, nicely mixed and marbled, the corn being reserved for the finishing stage. The green feed consisted of oats, peas and tares, along with what hay they would eat. During July and August they had boiled peas and barley, mixed with bran and cut hay.

The calves were suckled till about ten and a half months old. The grain ration given along with the cow's milk consisted of ground oats, and bran about equal parts in weight, and during the last three months a small amount of corn was added to the oats and bran, but not as much as given to the yearlings. From September first until the show a small allowance of mangels was given twice per day, just enough to keep them hearty and in a thrifty condition. The roots were fed to yearlings as well as to calves.

Exercise was a very important factor in keeping them in vigorous condition, in order to grow and develop well. In May they were out on grass evenings for a short time, and in June, July and August they were all out at night, the yearlings in a grass lot, and the calves in a yard. All the green feed was given them in the stable. After September 1st they were stabled at night, and let out for exercise twice a day, except in wet or disagreeable weather.

Several things were closely adhered to, such as feeding the right kind of feed, feeding so that the animals would relish it, regularity in feeding and watering, and plenty of exercise to keep them in healthful condition.

The age and weight of the five animals on December 1st was as follows: Robert Bruce, 20 months, weight, 1450. Golden Crown, 19 mos., weight, 1326. Golden Robe, 11 months, weight, 1045. White Lily, 11 months, weight, 984. Black Prince, 13 months, weight, 998.

It will be noted that Robert Bruce at 20 months weighed more than the champion Advance did at 23 months.

Though wheat by itself is not adapted for feeding horses, yet it can readily be blended with other foods, especially if crushed. Two parts each of oats and corn and one part each of wheat and barley make an excellent mixture, which has been fed with marked success.

February Conventions.

Plans for the live stock and dairy conventions in February are progressing nicely and a most profitable time is expected. The following are the dates:

Feb. 19th—Sheep and Swine Breeders.
Feb. 20th—Pure Bred Cattle Breeders.
Feb. 21st—Horse Breeders.
Feb. 21st and 22nd—Dairy Association.
Feb. 20th-22nd—Cheese and Butter Makers' Union.

Among the prominent speakers at the live stock conventions will be Prof. Curtiss, of the Iowa Agricultural College; Alex. Galbraith, secretary of the American Clydesdale Association, Janesville, Wis.; Prof. G. E. Day, Ontario Agricultural College; J. A. Gris-dale, Experimental Farm, Ottawa; D. Drummond, Myrtle, Ont., and T. G. Raynor, Rosehall, Ont. Besides these, local men will also give papers.

At the Manitoba Dairy Convention Prof. J. W. Robertson, Dairy Commissioner, and J. A. Ruddick, formerly Dairy Commissioner of New Zealand, will be the leading speakers. Local talent will also be employed.

The conventions will be held during the second week of the Winnipeg bonspiel, when special rates will prevail.

Faithful Unto Death.

Last October, a cold spell in Montana killed a shepherd in the Great Fall district, two feet of snow covering the range in places, and the thermometer indicated 40 degrees below zero. The herder was frozen to death on the prairies while caring for the sheep, and it was three days before his fate was known to his employers. Two shepherd dogs were with him when he died, and one of them stayed with him while the other attended to the sheep, just as though the herder had been with him. The dog drove them out on the range in the morning and back again at night, guarding them from wolves and preventing them from straying off. Neither dog had anything to eat during the three days' vigil, so far as could be ascertained.

The Wolf Question.

The Medicine Hat News says:—"A number of the half-breeds around here are out hunting wolves this winter, and with fairly good success. The ranchers in some localities are supplementing the government bounty by a private grant, so that the dead wolves bring the hunters about \$30 apiece. Ranchers south of Walsh have been complaining of a band of wolves lately which has been very bold and cheeky. One large wolf killed in that locality brought the hunter \$30 in bounties and H. H. Ross gave \$5 for the skin, to have it tanned and mounted."

The same paper contends that instead of the ranchers being compelled to pay high bounties for the destruction of wolves, as they are now doing, it should be pressed on the attention of the Department of the Interior, that some proportion of the grazing rents now collected by that department ought to be spent to encourage the destruction of wolves.

As high as \$125 has been paid for horses at public auction on the Chicago horse market, for horses to go to South Africa.

Cattle feed is reported so short in S. Dakota that some men have shipped their stock to Nebraska, to be wintered there.

Dip the bridle bits into water in cold weather before putting them in the horses' mouths. If you doubt the necessity put your tongue to a frosty nail.

Jas. Strang, Baldur, Man., Jan. 16, 1901:—"I have known single copies of The Nor-West Farmer on several occasions to be worth the year's subscription."

Canadian Jersey Breeders' Association.

The seventh annual meeting of the association was held in Toronto on Dec. 28th. The attendance was the largest in the history of the association, and the enthusiasm and interest manifested speaks for this body an influence for good among the dairymen of the Dominion. The president, G. Davies, Todmorden, in his opening address, said the prospects for the Jersey breed were never better. The judging at the large exhibitions had of late tended to the establishment of a fixed type and breeders now had a guide in their work. The demand of well-to-do people for milk and cream rich in butter fat has caused many farmers to secure Jerseys, so as to meet the increasing demand. After the reading of the minutes, Mr. F. W. Hodson, Live Stock Commissioner, gave a very interesting account of the work done to secure better accommodation and cheaper rates for the transportation of livestock to all points in our great west and throughout Ontario.

The scheme and regulations for establishing annual sales of live stock under the auspices of the live stock associations were endorsed and arrangements were also made for affiliation with the Dominion Cattle Breeders' Association.

On motion of W. E. H. Massey, and seconded by J. H. Smith, the secretary was instructed to write the Toronto Industrial Fair Board, asking them to provide a pavilion at the cattle ring for the accommodation of those interested in the judging of cattle, and that the co-operation of other cattle associations be secured.

Much dissatisfaction was expressed with the manner of conducting the dairy tests and the regulations governing the same at exhibitions, and at the Provincial Winter Show. The Jersey breeders present felt that the true value of a dairy cow is the net profit in a year's work, not what she can do in two days or seven days.

Mr. Massey spoke on improving the quality of milk supplied in large towns and cities, and contended that it should be paid for according to the percentage of butter fat it contained.

V. E. Fuller, corresponding secretary of American Jersey Cattle Club, made some interesting remarks on the history of the Jersey cow in America. She is no longer the rich man's pet, but is to be found in every up-to-date dairy from the Pacific to the Atlantic, and from the frozen regions in the north to the sunny slopes of Mexico. She has proved herself to be a producer of a large quantity of rich milk, is long lived and very hardy. Mr. Fuller expressed his pleasure at being present and wished the Jersey breeders every success.

Officers for 1901—Pres., Capt. Rolph, Markham; Vice-Pres.—R. J. Fleming, Toronto; Sec.-Treas.—R. Reid, Berlin; Executive Committee—Messrs. D. O. Bull Geo. Davies, H. G. Clark, W. E. H. Massey and D. Duncan.

Hereford Breeders' Meeting.

The tenth annual meeting of the Canadian Hereford Breeders' Association, held in Guelph recently, was well attended. A. S. Hunter, of Durham, occupied the chair. Among the members present were—Messrs. Philp and McKellar, of Brandon, Manitoba; Alf. Stone, Guelph; W. H. Hammell, A. S. Hunter, H. Reid, H. G. Wade, Toronto; G. De Green, Toronto; W. W. Black, Amherst; J. A. McDermid, Henry Wade, secretary. The annual report of the secretary was read. It told of numerous and satisfactory sales. It noticed with regret the death of the president, Walter McDonald, of Toronto. The year had seen some unprecedented sales, including a bull calf, Dale, at Chicago, for \$7,050, and a cow, four years old, for \$3,150, the highest on record for a Hereford cow. The financial statement showed a balance on hand of \$234.04. The following resolutions were passed:—

Moved by W. Reid, seconded by W. H. Hammell, "That this association is of the opinion that the existing regulations as to ranging of cattle in the Northwest Territories should be amended, and that the amended regulations should make it obligatory for all parties running cattle on the ranges to lease a range of 20 acres per head for every animal run; that the annual rental of two cents per acre be materially reduced; that all animals run on ranges should be subject to an annual tax of fifty cents per head where the owner of the brand is not a leaseholder; that homesteads be not granted in ranging districts; that any American cattle fit for shipment found on Canadian ranges be shipped to Canadian markets, and that the duty and annual tax be held and deducted from the price obtained; that leaseholders be given liberal privileges of purchasing flocks of land within their leaseholds; that the breeders of cattle on the ranges should be encouraged by granting liberal wolf bounties; that a sufficient part of the revenue derived from the ranching industry be applied to establishing effective fire guards; that the running of scrub hells be limited."

Moved by W. H. Hammell, seconded by Alfred Stone, "That, in the opinion of this association, the cattle breeding industry is seriously menaced by the tuberculin test, as applied to cattle purchased for importation or sold for export; that the test is misleading and of no real value in detecting the disease. Therefore we respectfully ask the Hon. the Minister of Agriculture for the Dominion of Canada to discontinue the use of the test in such cases, so far as is within his power."

The officers for the next year were then elected as follows:—Pres., W. H. Hunter, Naples. Vice-Presidents—Ontario, Alfred Stone; Quebec, H. D. Smith, Compton; Manitoba, A. E. Philp, Brandon; Maritime Provinces, W. W. Black, Amherst, N.S. Directors—A. Rawlings, Forest; A. S. Hunter, Durham; A. H. O'Neill, Southgate; Mossom Boyd, Bohaygeon; J. A. McDermid, Stayner; W. H. Hammell, Beeton; H. Reid, Milmosa; Asa Warnick, Painswick.

Leicester Breeders.

At the annual meeting of the American Leicester Breeders' Association the President, D. C. Graham, of Cameron, Illinois, occupied the chair. Messrs. A. W. Smith, C. E. Wood and J. H. Grisdale were appointed a committee to draw up a resolution of regret and condolence at the death of Mr. John Laidlaw, of Wilton Grove, Ont. Prof. Grisdale, though not exclusively a breeder, spoke of Leicesters as the blue-bloods of all breeds of sheep. The next meeting of the association will be held at Buffalo during the week of the sheep exhibition at the Pan-American. The officers were elected as follows:—President, D. C. Graham, Cameron, Ill.; Vice-Pres., A. W. Smith, Maple Lodge, Ont.; Sec.-Treas., A. J. Temple, Cameron, Ill.; Directors, John Kelly, Shakespeare, Ont.; J. W. Murphy, Cass City, Mich.; J. M. Gardhouse, Highfield, Ont.; James Snell, Clinton, Ont.; C. E. Wood, Freeman, Ont. A grant of \$100 was made to the Pan-American Exposition and \$25 to the Fat Stock Show. The secretary was instructed to hurry the publication of the stock record, and he expects to have it out in a couple of months.

Remarkable Horsemanship.

A record of a remarkable leap and a daring piece of horsemanship comes from New South Wales. Some years ago Adam Lindsay Gordon made a wonderful leap on the banks of the Blue Lake, Mount Gambier, and L. A. Skuthorpe, of Moree, duplicated the feat. He rode the hunter Wallace, and had a run of 24 feet on a macadamized road to a three-rail fence of a height of 4 feet 3 inches, with a gutter on the take-off side. The ground available on the landing side was 10 feet; then there was a precipitous fall to the lake below of about 250 feet. The horse stopped in a stride on landing, amidst the greatest excitement. The slightest mistake on the part of the horse or rider would have led to serious injury if not to certain death. Skuthorpe is a professional horse trainer and probably undertook the wonderful but foolhardy feat as more or less of an advertisement. It is the second time it has been accomplished.

The carrot is the best adapted for horse feeding of all the roots. Horses are naturally fond of carrots and frequently when sick will eat a few sliced carrots after refusing everything else.

Give the young pigs a fair start in life by feeding the sow a milk producing ration. For this there is nothing better than skim-milk mixed with shorts.

Mix salt with the food of the growing pig, and give him a box of ashes, into which a little sulphur is thrown. This prevents the loss of power in the hind legs, so common in highly-fed swine.

It is reported that an old buffalo bull recently joined the herd of cattle belonging to the Indians on the Indian reserve near Bismarck, N. D. Orders have been issued not to molest him.

The first combination auction sale of pure-bred live stock, under the auspices of the Live Stock Associations, will be held in Ontario next month. The first of these sales will be held at Guelph, on Feb. 27th, and the second at Ottawa, on March 6th, 1901.

Foot and mouth disease is prevalent in some districts of France, and so strong is its hold that the attempts of the local and governmental authorities to stamp it out have not as yet succeeded. The latest returns show that 80 districts are affected.

"The Nor'-West Farmer is thoroughly alive to the interests of the people it represents and, like things generally out west, is going right ahead."—Canadian Bee Journal.

THORNCLIFFE STOCK FARM.

Largest Stud of Clydesdales in Canada

Headed by the champion stallion of all ages, LYON MACGREGOR.

STALLIONS & COLTS from the best blood in Scotland and Canada.

AYRSHIRE BULLS & HEIFERS from imported stock.

BEST MILKING STRAINS with good teats

TERMS REASONABLE.

A visit to Thorncliffe will repay you.

ROBT. DAVIES, Thorncliffe Stock Farm, Toronto

PIONEER HERD OF SHORTHORNS



I have been breeding Shorthorn Cattle right here for over a quarter of a century. I breed my own Show Cattle, and last year had at the Winnipeg Industrial the Gold Medal Herd. First for Bull and two of his get, and first for Cow and two of her progeny.

I usually have stuff for sale and am always pleased to show it.

WALTER LYNCH, Westbourne, Man.

FOR SALE.

10 Young Shorthorn Bulls

Age, from 10 to 16 months. Our herd was awarded in Toronto, 1900, first prize for best herd of one bull and four females, first prize for Breeders Herd of four females, also Gold Medal for female any age. The herd has produced such bulls as Banker, Lord Stanley, 5 times first and a sweepstakes winner in Chicago 1893. Moneyfuffel Lad, three years sweepstakes bull in Toronto, and Topsman, 1st prize and sweepstakes, Gold Medal in Toronto, 1899.

J. & W. Russell, Richmond Hill, Ont

SHORTHORNS, B. P. ROCKS

NINE BULL CALVES
For Sale SEVERAL FINE HEIFERS

50 to 60 B. P. ROCKS

(strong, well marked cockerels).

My herd consists of 40 animals, headed by Lord Stanley 25th. Correspondence solicited.

WALTER JAMES - Rosser, Man.

Thorncliffe Stock Farm

24 SHORTHORN BULLS
30 " FEMALES

For sale. They are a good strong lot. Write to

JOHN S. ROBSON,
Manitou, Man.



A lot of nice young

BERKSHIRE SOWS

Bred or unbred. Price \$15 00. M. B. TURKEYS—a few nice young hens at \$3 00 each. TOULOUSE GEESE—all sold. B. P. ROCK COCKERELS—a few left.

WM. KITSON, Burnside, Man.

J. E. SMITH

J. E. Smith offers for sale 45 Shorthorn Bulls, all ages. A number sired by Lord Stanley II (22260) Some (imp.) from Ontario. All this year's crop of Golden Measure (imp.) calves are sold. 30 Shorthorn Heifers, from 6 months to 2 years old. 60 Shorthorn Cows, all ages. A few young Clydesdale stallions, mares and fillies of all ages for sale. Everything for sale except my stock bulls, Lord Stanley II and Golden Measure (imp.) and the Clydesdale stallion Prince Charlie (imp.). Come and see the stock.

J. E. SMITH, P.O. Box 274, Tel. 4, SMITHFIELD AV BRANDON

SHORTHORNS.

Number of young Bulls and a few good Cows in calf for sale. Barons Pride (imp) first in his class at Winnipeg, 1899, Stock Bull.

J. H. KINNEAR & SON, Souris, Man.

MAPLE GROVE FARM

D. E. CORBETT, breeder of

SHROPSHIRE SHEEP.

Stock always for sale. Have a bunch of nice ram and ewe lambs for sale. My sheep are from the well-known breeders John Campbell and Hamner & Sons, Ontario. Address—Swan Lake P.O., Man.

PLAINVIEW STOCK FARM



Is always able and ready to supply your wants in

SHORTHORN BULLS and HEIFERS, COTSWOLD and LEICESTER RAMS and EWES, BERKSHIRE BOARS

And Sows in farrow, Toulouse Geese and S. P. Rocks at had crop prices. Write or call and see what I will do for the next 30 days to make room for young stock coming. Lyndhurst 4th, that great show Bull and Spicey Robin at the head of the Shorthorns, Fitzsimons B. leading the Cotswolds to the front, and Gallant Boy, Tippecanoe 2nd and Can't Be Beat heading herd of Berkshires, has produced the best I have ever had and can do it again.

Come and see my stock, you will be welcome. No business, no harm. Will be met at station and returned there.

F. W. BROWN, Proprietor,
PORTAGE LA PRAIRIE, MAN.

TURTLE MOUNTAIN STUD OF CLYDESDALES.

Imp. and Home-bred Stallions for Sale.

Two-three and four-year-old Colts, sired by such noted stallions as

PRINCE OF WALES (673) DARNLEY (222)

BELTED KNIGHT (1395) STANLEY PRINCE (6315)

PRINCE PATRICK (8933) MACGREGOR (1487)

These horses are of the finest quality, good action, good large flat bone, the best hoofs. Some of them prize-winners in the old country, and all of them large. For further particulars apply to

J. C. McLEOD, Manager, Ninga, Man.

Another importation to arrive the last of March

CAIRNBROGIE'S

Great Stud



GRAHAM BROS., Claremont, Ont.,

Breeders and Importers of

Clydesdale & Hackney Horses

Handling only the best of their respective breeds, we have now on hand more good young Stallions and Mares than ever before, home bred and imported, of choicest breeding, of ample size, combined with the very best quality and action. Prices in keeping with the quality of our offerings.

Claremont is 25 miles east of Toronto on the C.P.R. Farm one mile from station. Correspondence and an examination of our stock solicited.

ROXEY STOCK FARM, BRANDON, MAN.

J. A. S. Macmillan,

Importer and Breeder of Pure-Bred



Clydesdales, Shire & Hackney Stallions and Mares, Shorthorn Cattle and Shropshire Sheep.

Correspondence solicited. Inspection invited. Prices right Terms easy Full particulars on application. Apply P.O. Box 483, Brandon, Man

Shorthorns are what we are breeding, and if you want anything in our line you may find it to your advantage to try us before buying elsewhere.

D. HYSOP & SON
2 1/2 miles from station Box 492, Killarney, Man

Improving Range Horses.

U.S. range horse breeders are confidently counting on a boom in horses during the coming season. All will depend upon the class of horse they have to offer. The records of the large horse markets show that range owners can grade up their horses very materially by a judicious use of draft sires of high merit. If range mares are of an inferior quality, the only safe way to get good saleable progeny is to use the best sires procurable. Too many breeders think that some rickety old mongrel stallion, or at best, an inferior cheap one, is good enough for poor mares. There never was a greater mistake. The progeny of such a union will never be any better than the mares and will never make money for the breeder. The only way to make a success where the mares are of an inferior quality is to use sires possessing superior merit in a marked degree. There must be high merit on one side or the other, or how can improvement be made? If the mares do not possess it, the sire must. The higher price obtained for the progeny will pay a large dividend on the extra cost of a sire possessing the necessary qualities needed in a high degree. Ranchers are not the only ones who make this mistake. Farmers everywhere make the same mistake. A stream cannot rise higher than its source, and it is equally useless to expect first class progeny from second class parents. The saving of a few dollars in the service fee is very shortsighted economy, as it is most likely to result in the loss of ten times, often twenty times, the amount saved when the progeny is placed on the market a few years later.

To Kill Lice.

To kill cattle lice, says Simpson Rennie, the well-known stock raiser of Markham, Ont., we rub black oil made from petroleum, and known as Champion, costing 25c. per gallon, along the hair on the back and round the horns and root of the tail. The oil is best mixed with half a pint of spirits of turpentine to a gallon of oil, and one application will cure the lice.

Wyoming cattlemen are taking a sensible way to improve their herds. Seven men joined together and sent one of their number to Iowa to purchase a carload of Shorthorn bulls. This he did, the carload being divided between them.

Mr. Gilbert Murray says that an improved class of stock, whether for breeding purposes or the production of meat and milk, has been and will continue to be the sheet-anchor of the British farmer. Why not of the Canadian farmer as well?

An experiment is being made at Dayton, Washington, in utilizing the volunteer wheat in the stubble fields for fattening lambs. A large flock of wethers has been brought in from Oregon for the purpose. If this succeeds, it will mean quite a thing for the wheat districts of the Pacific coast.

The ranchers of the Yorkton district intend to form a Stock Growers' Association, and for that purpose a committee composed of the leading stockmen of that section of country has been formed to draft a constitution on the lines of the Western Stockgrowers' Association and report to a meeting, which will be called at a later date.

A sure way to weaken the constitution of stock is to breed for a term of years from that which is immature. The natural tendency among farmers is to do this very thing, selling the brood sows because they are inclined to grow fat; but the second and third years they will bring larger and stronger litters.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. 25c. E. W. Grove's signature is on each box.

AMONG THE BREEDERS.

F. J. Collyer, Welwyn, Assa., shipped two Polled Angus hull calves to British Columbia this month.

John Logan, Murchison, Man., writes that he has sold one hull calf each to W. Card, Neepawa, and W. J. Bonney, Eden, Man.

Peter le Boutillier, Minnedosa, Man., is offering for sale or exchange his Hereford hull, Napoleon, 625. This hull is sired by Wilton Hillhurst, 427, dam Phyllis, 757 and was bred by Sir Donald A. Smith, St. James, Man. He has proved a good breeder, but has to be replaced by new blood. Mr. Boutillier has some 13 heifers, from 6 to 18 months old, for sale, but so great has been the demand for young hulls that his supply is exhausted.

At the recent sale held by John Isaac, of Markham Ont., our Manitoba breeders hough very freely and at high figures. W. S. Lister, Middlechurch, was the heaviest buyer at the sale, taking 11 head, at an average of \$382; J. E. Smith, Brandon, had three, averaging \$342. Wm. Chalmers, Hayfield, had a hull calf at \$300, and Thos. Speers, Oak Lake, a hull and heifer, costing together \$390. The highest priced hull went to Iowa at \$600. For Rosebud, imp., W. D. Platt, paid \$1,025. For the 44 females offered the average was \$448. For eight hulls, \$278, a very gratifying average.

Some of those who have read the article, "Sheep Raising in Manitoba," by D. E. Corbett, Swan Lake, Man., have been impressed with the practical common-sense which it contains. Those who have not read it might do so with profit. In regard to Mr. Corbett's experience with sheep, it is worthy of note that he is an old hand at the business, and has had splendid success. He has an advertisement in another column in regard to a nice bunch of ram and ewe Shrops which he is offering for sale. Mr. Corbett's sheep are from the well-known breeders, John Campbell and Llaner & Sons, both of whose flocks won out so well at the last Toronto Fair, as well as at the Winter Show.

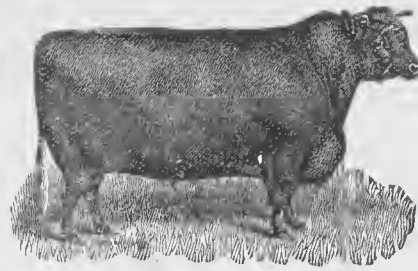
Hy. Byers, Macgregor, Man., writes: "I answered the advertisement of W. Crothers, Pipestone, for an A1 heavy stallion, in your 'Want and Exchange column,' and it led to my making a sale to him of my imported Shire stallion, Indiana, 5158. This promising young horse has put on great growth since I exhibited him in Winnipeg last summer (where he took the red ticket), and I think will mature to 1,850 lbs., the weight of his sire, Blocky Tom. The Virden farmers are to be congratulated upon the acquisition of this grand young horse, and I am satisfied he will be a money maker for Mr. Crothers, as I only used him to a few mares last season and he left 90 per cent. of colts, thus proving himself a sure sire. This proves that your 'Want and Exchange' column is doing great good in bringing buyer and seller together."

Wm. Kitson, Burnside, writes: "My birds and Berkshires are 'all right.' B.P. Rocks, Toulouse geese, and M. B. turkeys have given general, and in most cases splendid satisfaction. This is a great satisfaction to me, and lightens my labor among them. Of late there has been quite a call for Berkshire boars fit for service. Now, if parties would buy earlier, they would save considerably in express charges. I have a lot of nice young Berkshire sows which can be bred to a young imported (in dam) eastern bred boar, a very long robust fellow. I can ship at Burnside, Macdonald, or Portage la Prairie, on C.P.R., or N.P. I expect to send a few M. B. turkeys to the Brandon Poultry Show."

J. J. Caswell, Saskatoon, Sask., writes: "I have just returned from a trip through Manitoba in search of a couple of young hulls. I saw many fine animals, especially in the herds of Walter Lynch, Westbourne, J. E. Smith, Brandon, and J. G. Barron, Carberry. I finally purchased two from J. G. Barron. One of them is a nine months old hull got by his imported hull, Nohleman, and out of a Topsman heifer. He is for a neighbor who is starting a Shorthorn herd with foundation stock of our breeding. I paid \$150 for this hull. The other one cost me \$200 and is only six months old. He is sired by Topsman's Duke, the first prize two-year-old hull at Winnipeg last July. He is one of the best calves Mr. Barron has ever raised. In conclusion, let me say that the condition in which Mr. Barron keeps his herd is a credit to him and to the Province of Manitoba."

Jas. Glennie, Longhurn, Man., writes: "My cattle are coming through the winter very well on chop and straw. I never knew the feeding value of straw until the present winter. Our fresh heavy milkers are getting 14 lbs. of chop a day, composed of 3 parts of barley and 1 part oats, with straw for roughage. I hope to add bran to this mixture very soon. Corn cured in the stook and stored four or five feet deep in a loft spoiled a little in some places. [Ed. Note.—Corn will always spoil, more or less, when the stalks are laid down. The usual plan is to store it standing as straight up as possible.] By the way, I see that Daisy Teake's Queen is the champion cow of the Dominion for 1900. Her record at Brandon was slightly

Marchmont Stock Farm.



Scotch-bred SHORTHORNS

OF
MINA, MISSIE, ROSEBUD, WIMPLE,
DUCHESS OF GLOUCESTER, JEALOUSY
And other well-known popular Scotch trihes.

"Priuce Alpine" (imp.) got by "Emancipator" (6544) at the head of the herd, assisted by "Crow Jewell 16th," first-prize winner at Toronto, '97-'98.

**3 YEARLING BULLS
12 BULL CALVES**

FOR SALE AT MODERATE PRICES.

7 miles north of Winnipeg.
Telephone No. 1004 B.

W. S. LISTER, Middlechurch P. O.

Prairie Home Stock Farm.

SHORTHORN & AYRSHIRE CATTLE.
Yorkshires, Berkshires, Shropshires.

JANUARY OFFERING

25 Shearling & Ram Lambs

2 Ayrshire Bulls

80 Fall Pigs all littered since summer fairs.

PIGS ALL AGES—BOTH BREEDS.

Shorthorn herd headed by "Judge," 23419, and imported "Jubilee," 28858. The females are rich in the blood of the most famous families. Ayrshire herd headed by "Surprise of Burnside." Females of the highest quality from the best strains. Yorkshire herd headed by "Oak Lodge Mighty 7th," and a recent importation of the approved hacon type, with a large herd of females of the choicest breeding. Berkshire herd headed by "Nonpareil," with 30 breeding sows of faultless conformation and superior breeding. Farm one mile from the station. Visitors welcome

THOS. GREENWAY, Proprietor.

JAS. YULE, Manager, CRYSTAL CITY.

Six Good Pointers.

I had a pig that was so crippled that I had almost decided to knock it on the head, as I did not think it would ever be any good. I was advised by John Wales to feed it Herbageum. I did so, and the pig came all right. It weighed when killed, 212 lbs. I am also satisfied that it is first-class for horses. — William Pearce, Palermo, Ont.

Hay was scarce here last winter, and I fed my horses on straw, with Herbageum. In the spring they were in good condition—in better condition than in previous seasons with hay.—A. B. Miller, Rainham Centre, Ont.

I have used considerable Herbageum and find good results on all classes of stock, not only with horses and cows, but especially so with calves; also with poultry.—Thomas Peel, Austin, Man.

I tested Herbageum on a yoke of steers, last spring, and am satisfied of its good effects, and believe that I had a fair margin of profit in its use.—Jas. Shaw, Hallville, Ont., July 23, 1899.

I have fed Herbageum to my milch cows. There was an improvement in the milk, and the cows were fit for beef in the spring. I fed it with roots—cutting the roots and sprinkling the Herbageum with a little bran over them.—T. C. Hagaman, Oakville, Ont., May 11, 1899.

I have used Herbageum for five or six years, principally for calves and milch cows. The latter I winter feed, as I run a winter butter dairy, keeping from 8 to 12 milch cows; making a specialty of choice butter, and I consider the use of Herbageum advantageous and economical.—James S. Miller, Parry Harbor, Ont., Sept. 12, '94.

HERBAGEUM is manufactured by the Beaver Mfg. Co., Galt, Ont., and can be purchased in nearly every town and village in Canada.

Peter Whitaker, Corvallis, Oregon, Jan. 7, 1901:—"I think your paper the best stock and farm paper I ever saw. It is with much pleasure I renew my subscription."

BISSELL'S

Steel Rollers

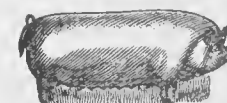
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FERGUS, ONT.

See page 64 for D. C. Harrow.

OAK GROVE FARM



SHORTHORNS,
YORKSHIRES,
WHITE P. ROCKS
FOR SALE

1 Young Bull sired by Knuckle Duster (imp.)
1 Young Bull, sired by Lord Lossie 22nd. Number of choice heifers. Fine lot of young boars and sows. White P. Rock Cockerels.

JAS. BRAY, Longburn, Man.

ABERDEEN STOCK FARM



130 Aberdeen Angus Cattle.
40 Shorthorn Cattle (OF GREAT VARIETY)
My Shorthorns were all brought in from Ontario two years ago.

Aged and Young Stock of all kinds for sale.

A. B. FLEMING, BRANDON, MAN.

HOLSTEINS AND YORKSHIRES

Some good young boars, fit for service. Prize winners. Prices reasonable for quality.

A. B. POTTER, - Montgomery, Assa.

Rosebank Farm.

For Sale Victoria's Montrose, the well known Polled Angus hull, first at Winnipeg & Brandon. He also took the silver medal and diploma and herd prize. We have a few hulls and heifers sired by Victoria's Montrose. Write—

A. CUMMING, Lone Tree P. O., Man.

abead of the cow that won at Toronto, and also abead of the cow that won at the Winter Show at Guelph. Sbs is now past the 12,000 lb. mark since the 1st of May last."

The Forest Home herd of half a hundred Shorthorns are pulling through the winter in good shape; owing to scarcity of feed, the herd is not carrying as much flesh as in former years, but every animal in the herd is in nice healthy condition. Robbie O'Day, the head of the herd, has improved very much since the summer show. Among the young stuff there are some ten young bulls, also a like number of heifers, which Mr. Grabam is offering for sale, owing to scarcity of room and feed. These youngsters are being offered at very moderate prices, are all sired by Robbie O'Day, and combine size and quality to a marked degree. The York-shire herd is headed by Summer Hill Premier, imp., and General Buller (two of the best boars that have ever been used on the herd), and comprises a dozen breeding sows, consisting of some very choice selections from the Brethour and Platt herds, together with some equally good home-bred animals of the grand old Marjorie strain. Some fine young stock of both sexes are for sale, including some young sows recently bred. Mention should be made of the very attractive yard of B.P. Rocks; among them there are some grand young cockerels that are bound to please any purchaser."

J. A. S. Macmillan, Roxey Stock Farm, Brandon, Man., has just issued a catalogue of his Clydesdale stud. It contains the pedigrees of seven Clydesdale stallions and one imported Yorkshires Cleveland bay. At the head of the stud is the stallion, Pilgrim, 7,020, well known throughout the province as winner of first place and sweepstakes at Winnipeg in 1900. He is a dark bay standing 17 hands high, and a grandson of the famous old Macgregor. Four imported Clydesdale stallions are: Royal Union, 9,308, a dark bay with stripe on face, bred by James Dickson, Scotland, is a handsome well put-up horse rising five. His sire, Royal Cartley has a distinguished career. Cavendish, 10,524, a bay, rising four, is bred by Robt. Muirhead, Dalbeattie, Scotland. He is a horse of grand quality, good action and is sired by Montrave Shab a grandson of Prince of Wales. Garland, 10,555, another bay, rising four, is bred by Wm. Gibson, of Stranraer, Scotland, and sired by Macgregor, by Darnley, 222. Another handsome colt is Glenbuck, 9,234, foaled April 24th, 1898. He possesses good feet and legs, has broad clean bone and good action. His sire is Montrave Sentinel and is of similar breeding to Cavendish on his sire's side. His dam is Orphan, by MacHugh, a capital specimen of the Clydesdale draft horse. Along with these Mr. Macmillan has two of N. P. Clarke's breeding, from St. Cloud, Minn., Hillocks, 8,845, by Macclinker, by Macgregor, by Darnley, and Prince Bonny-bridge, 9,223, by Prince Patrick, by Prince of Wales. Two of his own breeding are given: Peter the Great, by MacTlier, by Macgregor, and Baron of Avenel by Nansen, imp., by Baron's Pride, one of the best known horses in Scotland to-day. To these Mr. Macmillan has added the imported Yorkshire Cleveland hay stallion, Ferndals Hero, a rich deep colored bay with black points, standing 16.1 hands and weighing 1,450 lbs. He is royally bred and imported. There are now no less than 16 Clydesdale mares in his stud, and Mr. Macmillan is to his congratulated on the excellence of his horses.

W. E. Baldwin Manitou, writes: "I have just received from A. C. Hallman, Waterloo Co., Ont., three Tamworth pigs, two sows and one boar, of the regular bacon type. All three are from imported stock and are very smooth in the bone, with good length and deep sides. The call for the favorite bacon pig has been so great that I have been forced to import from the east to supply this demand. Two years ago I started with only one brood sow, Manitou Rose; I found this call for this breed of pigs was growing larger, and so I added another sow, Pearl of Springbank. The demand was still increasing; I sold all my young stock, and getting good offers for my brood sows, I disposed of them keeping only one young sow, Lady Elgin which took 1st at Winnipeg last year. She has developed into a grand sow. I have now four capital brood sows—Lady Elgin, sire British Champion (imp.), dam Manitou Rose; Western Girl, sire and dam the same; Grace Darling, imported from the east, sire British King (imp.), dam Oxford Queen (imp.); Joan, sire Whitacre Crystal (imp.), dam Joan (imp.). The boar is Dr. Leyds, sire British King (imp.), dam Bronze Belle. Another boar I am keeping is Britain's Pride, from imported stock. It is simply wonderful how this popular breed of swine has forced itself into public favor in so short a time. Only a few years ago this breed was scarcely thought of, and to-day it is scattered over the whole Dominion. It is known as the packer's favorite, and it is because of its actual worth to the packers from the consumers' standpoint that this breed has made such marvellous headway. We find that when the almighty dollar is the object sought prejudice disappears. The hardness, superior quality of bacon, quiet disposition, good feeding qualities, large weights and early maturity, have been the means of pushing the Tamworths to the front in a short time. What the packer calls for is a pig with a long body, deep side, small head, light shoulders, showing the same width along the back and not widening out at the shoulders and narrowing in at the flank, as some breeds do. The popular weight is as near to 180 lbs. as possible. I think there is no breed of pigs that comes so near the packer's standard as the ideal Tamworth."



As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.00. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

Answers to Questions.

By an Experienced Veterinarian.

Condition Powder.

R. F. D., Lacombe, Alta.: "Kindly give me a good recipe for a home made condition powder for horses, and also the proportion to give daily."

Answer.—Take of powdered ginger, fenugreek, saltpetre, and copperas, of each one part, of gentian root, two parts. Dose, one tablespoonful two or three times daily.

Breeding Mules.

C. G. C., St. Charles, Man.: "What is the approximate weight of the ass crossed with the mare to produce the large sized mule? Has the size of the ass as much to do with the size of the mule as the size of the horse stallion has with the size of horse colt?"

Answer.—The size of the "jack," or male ass, has quite as much to do with the size of the mule progeny as the stallion has with his colt. For this reason a large jack must be employed if large mules are desired. The Spanish jackass is said to be the best to breed from for this purpose and weighs from ten to twelve hundred pounds.

A Cure for a Cripple.

J. W. R., Sidney, Man.: "1. A seven-year-old horse is stiff and lame on his front feet. Has been so for a couple of years. Has never been foundered, that I know of. Can anything be done for him? 2. A horse has sore hind legs from the hocks down. They are itchy and he will bite them until he makes them bleed. What can be done for them?"

Answer.—1. The operation of neurectomy, or "nerving," as it is called by horsemen, is the only cure for a chronic cripple such as you have, and will restore him to usefulness for some time.

2. See answer to W. S. B. in last issue.

Anæmia.

F. J. F., St. Louis, Sask.: "A four-year-old horse was troubled with his teeth last year, two appearing at the same time. He has kept in poor condition all fall, though he has not done much work. He does not improve on good hay and oats. His general appearance is dull, and he has no life, though he eats and drinks well."

Answer.—You should feed your horse some boiled feed every night, either barley or wheat. Also give him twice daily in his feed a dose of the following: Ferri sulph. exsic., four ounces; nux vomica, two ounces; ginger, two ounces; gentian, half a pound. Dose, two teaspoonsful.

Gonitis.

F. C. J., Oakley, N.W.T.: "About two years ago a horse became lame in the stifle, but got better in about two months. Was lame again about two months last winter. In October last he became lame again, but has not got over it; rest does not improve it. When standing in the stable he holds his foot up. There is a hard lump just below the joint, which blistering does not seem to affect."

Answer.—Inflammation of a joint is frequently difficult to cure and not seldom results in chronic lameness. The best mode of treatment for your horse is to insert a seton over the joint and thus establish a discharge, which should be kept up for two or three weeks. Any veterinary surgeon can insert the seton for you.

Prolapse of Vagina.

Subscriber, Moosomin, Assa.: "I have a cow in very good order that is within two months of calving. When lying down, something projects from the vagina at times, not all the time. It does not come out, but can be seen. She is all right when standing up. Would you anticipate any trouble in calving?"

Answer.—This condition is not unfrequently seen in cows shortly before parturition and does not indicate anything abnormal, but is rather a sign of unusual relaxation of the parts. The only danger to be anticipated in calving is the protrusion of the vagina, or

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WILL MAKE MONEY FOR YOU.

It is a scientific compound of the essential elements that are lacking in the various foods upon which horses, cattle, hogs and sheep generally subsist.



It produces flesh by compelling the system to do its best. It permits no food to pass off undigested. It wards off diseases. It is called a food for the want of a better name. It is not exactly a medicine, nor a substitute for hay and grain and other foods. It is both nutritious and curative. It is not a stimulant but a tonic. It aids the digestion, and thereby gets the most muscle and fat and milk and wool out of the various foods that the horses and hogs and cows and sheep eat.

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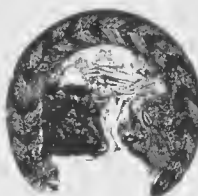
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Carman, C.P.R. Roland, N.P.R.

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Choice bred Shorthorns and registered Clydesdales. One imported Stallion & some very choice mares and fillies for sale. Two imported Bull calves and also one Bull calf from Caithness, and a few good show heifers and young cows and heifer calves for sale from Caithness.

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Ayrshires include many winners at leading Fairs.
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I have a number of promising young Stallions for sale.

My Shorthorn herd is headed by "Best Yet," bred by Hon. John Dryden, of Brooklyn, Ont. A number of young stock of both sexes, all registered, are for sale, and can be recommended as first-class animals.

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SHORTHORN CATTLE and LARGE ENGLISH BERKSHIRES.

Stock of my breeding has taken honors at the Winnipeg and Portage Fairs in 1900. I have a splendid pair of young bulls, and swine of both sex, for sale. **J. A. FRASER, Proprietor**

even of the womb, after the birth of the calf. This should be guarded against by standing the cow on a level floor, or what is better, one that slopes a little towards the front. On no account allow her to stand where the floor slopes backwards, or there is a gutter that she can get her hind quarters into when lying down.

A Tender Scar.

W. C. B., Carlevalle, Assa.: "Have a horse whose shoulder was eaten out by a stallion. It filled up considerably, so he can work in collar, but there is no hair on it, and the skin never gets hard. In fact, it is so thin that when it is healed up, a few days' work makes it sore again. Can you direct me how to harden it so it will not get sore?"

Answer.—The trouble here is that the surface of the wound is not covered with normal skin, but with cicatricial or scar tissue, which is much more tender than skin and easily gives way under pressure. You should use a collar pad and arrange it to take the pressure off the tender part as much as possible. The use of the following lotion will toughen the part and render it less liable to injury:—Tannic acid, two drachms; alcohol, six ounces; water to make one pint. Wet the part twice a day with this lotion.

Luxation of Patella.

A Subscriber, Greenway, Man.: "I have a mare colt coming three years old, Clyde bred. Some mornings, when I lead her out of stable, her right hind leg is stiff and she has no power in it. When she goes to move she switches her tail with pain. It acts as if it were sleeping. It was same way last winter, but got all right during summer. When she has been out for a few hours she gets all right. Please advise."

Answer.—This temporary stiffening of a hind leg is usually caused by a displacement or luxation of the patella, or "knee cap," a little bone that lies in front of the stifle joint. If you will turn back a few numbers of The Farmer, you will find this accident fully described. It is frequent in young horses and as a rule will disappear as they grow mature. You can assist recovery by applying a blister over the stifle and shoeing that foot with a shoe that projects a couple of inches at the toe.

Defective Teeth.

F. H. R., Bagot Man.: "I have a cow, seven years old, with lump about the size of a hen's egg (sometimes almost disappearing), on each side of upper jaw, just about where the grinders begin. Is this lumpy jaw or bad teeth? Cow is very poor and have noticed her sometimes, when chewing her cud, to 'fumble' it. Please tell me what I should do for her."

Answer.—The swelling noticed on each side of the jaw, "sometimes almost disappearing," is most likely a wad of chewed hay which has got packed in between the cheek and a defective tooth. You should examine the cow's mouth, and if you find teeth that are decayed, loose, or that appear to be much longer than their fellows, a veterinary surgeon should be employed to perform the necessary dental surgery.

Cause of Death in Young Pigs.

Subscriber, Brandon, Man.: "Can you give me information as to the cause of young pigs dying suddenly which are apparently in fine condition and mother the same. Pigs are about three weeks old and are kept in a horse stable, warm and dry. Am feeding the mother ground barley, with boiled potatoes, once a day. Pig weed seeds are mixed with the barley before being ground."

Answer.—There are several good veterinarians in Brandon and our advice to you would be to take a dead pig to one of them and have a post-mortem examination made. There is nothing in your letter to afford a clue to the cause of death and the food you are giving the mother appears to be all right. Under these circumstances it is impossible without a post-mortem to give an opinion of any value.

Sinus in Jaw.

G. A. Harris, Carlingville, Man.: "I have a colt, two years old in the spring, that has a running sore, which discharges foul smelling matter, at the junction of the lower jaw bones. I noticed it first during the fall. She had distemper last winter, but the disease did not break where the sore now is, but further up. The animal looks and eats well. Please prescribe."

Answer.—This may require to be opened up by a surgeon before it will heal, but you may try injections in it first. Procure some creolin at the drug store and make a solution of one teaspoonful to half a pint of warm water. Inject this into the sinus with a syringe and don't forget that if it is to do any good it must penetrate to the bottom of the sinus. Choose a syringe with a small nozzle and insert it deeply into the sore every time you make the injection. Keep the skin clean around the sinus by washing it with soap and water and inject the solution twice a day. If it is not healed or nearly so in ten days you had better take the colt to a veterinary surgeon.

Cellulitis—Condition Powder.

J. R. T., Moosomin, Assa.: "I have a mare, 14 years old and with foal, that start-

ed to swell in left front leg and up to breast and neck and then down the other leg; is hard and sore. She is also swelled under her jaw and throat. Is in good condition. 2. What will make a good condition powder for the blood?"

Answer.—1. Bathe the swollen parts with hot water twice a day, afterwards rubbing in some mild liniment, such as the liniment of iodide of potassium and soap, which any druggist will make for you. Give the mare twice a day two drachms of powdered boracic acid in her feed and continue for a week. Give her some boiled feed and see that she gets some exercise every day. 2. See answer to R. F. D., Lacombe, in this issue.

Why the Mare Lost Her Colt.

F. E. M., Elgin, Man.: "An aged mare lost her colt. Was fed on wheat straw and wheat screenings. Ran out whenever it was fine. Did not have a colt for five years before."

Answer.—Your question is indefinite, but presume you wish to know why the mare lost her colt. If this is the question, the answer is not easy to find, as the particulars given are not sufficient to warrant a definite opinion. However, it may be well to point out that the ration you were feeding the mare was not suitable for her condition and may have had much to do with the loss of her colt. Wheat straw is bulky and indigestible for horses, and often fills the large intestine with a mass of fibrous material which becomes impacted, producing a very obstinate form of constipation. Young stock that are running about all the time can get along in some sort on this kind of fodder, although there is little nutriment in it, but it should not be fed to mares in foal or old horses with defective teeth.

Mange.

Subscriber, Birdie, Man.: "What is the matter with my mare? Last October I noticed small pimples on the inside of one of her hind legs, which seemed very itchy. Now it is more or less all over her body, especially on her neck and breast and the inside of her hind legs. It is very itchy and spots where she has rubbed the hair off are sometimes very hot, with small red spots on them. I think it resembles eczema."

Answer.—Your mare appears to be affected with mange (or scabies), a disease caused by a small parasitic insect. The parasite causing bouy mange is of a different species from that causing leg mange and has somewhat different habits, sometimes burrowing into the outer layer of the skin, where it is concealed by a scab. The leg mange parasite does not burrow in the skin, but lives on the surface, and hence is easier to destroy than the kind affecting your mare. The first thing to do is to clip the hair off, then wash the skin thoroughly with soft soap and water wherever any scabs are to be found. Next rub in the following liniment:—Sulphur, 1 lb.; coal oil, 1 pint; lard, 3 lbs. Melt the lard and stir in the other ingredients. After rubbing this in thoroughly, not merely on the bad spots, but all over, cover her with a warm blanket and repeat the application in three days. Two or three applications should cure.

Staggers.

R. Hopkins, Horse Hills Alta.: "I bought a young mare, rising four years old, about two months ago. Hitched her up the next day, when she began to heave very hard, took staggers fell down and bled freely at the nose. I let her lie for a few minutes, when she got up and appeared to be all right. Hitched her up once since and she had a similar attack. She does not seem to have done any work and appears to be in foal. What is the cause and the remedy, if any? Would there be any danger of losing her in foaling. Mare seemed to have a lump in her throat while in this condition."

Answer.—This mare suffers from what horsemen call the "staggers," a condition of temporary congestion of the brain. The cause of this is some obstruction to the return flow of blood from the head to the trunk, and it may be that the lump you noticed in her throat is causing pressure on the jugular vein. The bleeding at the nose was the safety-valve by which nature relieved the extreme blood pressure in the head. Anything which quickens the pulse, such as excitement, rapid exercise, straining to pull, etc. is likely to produce an attack, and the mare would be liable to have one during the straining incidental to parturition. At the same time the attack would not likely be any more severe than those she has had and not necessarily dangerous to life.

Sore Mouth.

Novice, Fairfax, Man.: "Mare, Clyde bred, 17 years old. Feed: morning—oat straw, with chop—chop made from wheat screenings (mostly small wheat), mixed with one-fourth its bulk of bran; noon—oat sheaves, five o'clock—hay; nine o'clock—oat and barley sheaves, cut before there was any grain in head. About three months ago seemed to have difficulty in eating; would chew hay and then put it out again. In drinking, which she could only do slowly, chewed food would run out of her nostrils. Took her to V.S., who said she had laryngitis. Gave me some powders for her and some liniment for her throat. These apparently did her no good. Took her back again to him. He examined mouth and said he could see nothing the matter with it. Gave me some more powders and told me to blister her throat with vinegar and mustard. Did as



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and save the toll. You have the horses, we have the power and mill. Thousands of the—

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hurts much less than a bruise, crush or tear. Done with the

DEHORNING KEYSTONE KNIFE

is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush, bruise or tear. Most humane method of dehorning known. Look highest award World's Fair. Write for free circulars before buying.

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This herd also won the Open Herd Prize against all comers and first for bull and two of his get. This is the Herd to buy from.

Berkshires and Yorkshires.

J. G. BARRON, Carberry, Man.

BUNGLODY STOCK FARM



Shorthorns FOR SALE.

1 Roan Bull, 20 mos. old; 1 dark red bull calf, 9 mos. old; 2 young cows; and 3 young heifers.

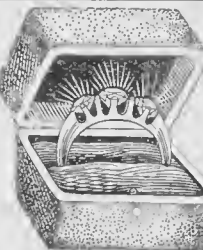
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Large English BERKSHIRE SWINE and SHORTHORN CATTLE.

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Pumps!

IF YOU want a good PUMP try one of our CATTLE PUMPS, fitted with Porcelain lined Cylinders, and fills a pail in about three strokes.

We have a large stock of Wood Pumps and repairs always on hand. Satisfaction guaranteed. Agent for Myra's brass-lined Cylinder Pumps and Hayes' double-acting Force Pumps. Write for catalogue. Office and factory—9th Street.

BRANDON PUMP WORKS, H. Cater, Prop. Box 410, Brandon, Man.

Wm. G. STYLES, Rosser, Man.

Breeder of

Shorthorns, Yorkshires, Tamworths

Young and aged stock of above breeds always on hand. Six splendid bull calves and young sows at reasonable rates. Parties met by appointment at Rosser.

R. McLENNAN, Moropano P.O., Man

Lakeside Stock Farm.

SHORTHORNS FOR SALE

Females bred, and with calves at foot. Six young Bulls, growthy and full of quality. All by the imported bull SIR COLIN CAMPBELL.

JOHN WALLACE

Cartwright, Manitoba.

Breeder of high-class

HEREFORDS.

15 young Bulls for sale.

STALLIONS AND BULLS

I am offering for sale

Roadster Stallion "Harry's Boy"

Imp. Clyde Stallion, (5069, Vol. 9.)

Shorthorn Bull, 18 months old.

Two Shorthorn Bull Calves

WM. MAXWELL, MOROPANO, MAN.

LARGE ENGLISH BERKSHIRES

Four Boars of February litters at \$7.00 each, second litters now coming will be sold at \$5.00 each. First come, first served. Two first prize Boars at head of herd. Pairs not akin.

JOSEPH LAIDLER, Neepawa.

CAMERA With complete outfit for selling only 15 gold topped Lever Buttons at 10c. each. This Camera takes a 2x2 picture, and is so simple to operate that any bright boy or girl can, with a little practice, make good photographs. The outfit consists of a Camera, 1 box dry plates, 1 package hypo, 1 printing frame, 2 developing trays, 1 package developer, 1 package fixing powder, 1 package ruby paper, 1 dozen sensitized papers and a full set of directions. Mail us this advertisement and we will send you the buttons. Sell them, return the money and we will forward your Camera, carefully packed, free of all charge. Write us today. Lever Button Co., Box 2102 Toronto

directed and she seemed a little better for a time, but is now the same as before. Has been this way for two months now. She coughs a little occasionally; is stocked a little in the hind legs, and is in fair condition. She is in fair spirits for an old horse and is holding her own as regards flesh, of course she is not working. Please prescribe."

Answer.—The symptoms point unmistakably to a sore mouth, or throat, and as treatment of the latter was followed by a temporary improvement, and then a relapse, it looks as if some cause were at work continually to produce this effect. You have had the teeth examined and pronounced all right, so we may look elsewhere for the cause. This may be found in the barley sheaves which you are feeding her at night. The beards or awns of this grain have a wonderful way of insinuating themselves into the mouths of the tiny mucous ducts which are numerous in the mouth and throat. Once gaining an entrance into a duct or "follicle," their tendency is to work in deeper, and to gather other awns beside them, causing more or less irritation. Sometimes large sores are found in horse's mouths, caused by feeding on hay made from foxtail grass, as well as spear grass, and the unripe barley sheaves would have the same effect.

Tuberculosis—Tumor on Shoulder.

C. L. B., Wetaskiwin, Alta.: "1. I have a two-year-old steer which is getting very thin. He does not eat much, in fact, is eating less and less every day; has a cough which is worse after drinking. Have given him linseed tea and condition powder and bran mashes. Is it lung fever or tuberculosis? If he dies will there be any danger in feeding the flesh to dogs or hens? 2. An 11-year-old mare had a large swelling on her shoulder after a heavy day's pulling. It extended down the side of the shoulder to the arm. I bathed it with cold water, then with warm, adding salt and vinegar, and later, turpentine. It is still swollen. What can I do for her? 3. A stallion has a lump on the right side of his neck near the throat, caused, I think, by a heavy strap which was round his neck. Took this off, but the lump continues to grow. The left side has been enlarged for a year. I have blistered them and one lump has gone away. The lump seems to be between the flesh and the skin. 4. I used plaster lime on a ringbone; is it good?"

Answer.—1. This is a case of tuberculosis without a doubt. You should kill the steer, as the presence of the disease in your herd would endanger the health of other animals. Dogs and poultry do not readily contract tuberculosis, but you should not allow them to feed on the flesh of the steer unless cooked.

2. Apply the following liniment to the swelling once a day:—Oil of turpentine, one ounce; ammonia, one ounce; linseed oil, three ounces. To be well shaken and rubbed in with the hand. A few applications will probably bring the swelling to a "head," that is, cause matter to form in it. It should then be lanced and the wound kept open until healed from the bottom.

3. The stallion has an enlarged thyroid gland, a condition more unsightly than dangerous. If you wish to remove it, rub in a little iodine ointment once a day, and give one drachm of iodide of potassium in the feed twice a day.

4. Yes.

It is stated that never before has there been so big a campaign of horse racing planned at this time of the year as there now is in both the United States and Canada. The new century will likely see more harness racing than ever before. A noticeable feature of the preparations being made for the racing events is the tendency of the leading trotting associations to increase their stake offerings.

Wanted—Farmer's Sons with knowledge of farm stock and fair education to work in an office; \$45 per month with advancement; steady employment; must be honest and reliable. Branch offices of the Association are being established in each Province. Apply at once, giving full particulars. Address, The Veterinary Science Association, London, Canada.

Choice Shorthorns

FOUR BULL CALVES, 6 months old, sired by Trout Creek Hero.

COWS and HEIFERS, served by Trout Creek Hero.

This stock is of the thrifty, low-set, blocky kind, and in the right condition to do well.

JOHN RAMSAY, - Priddis, Alta.

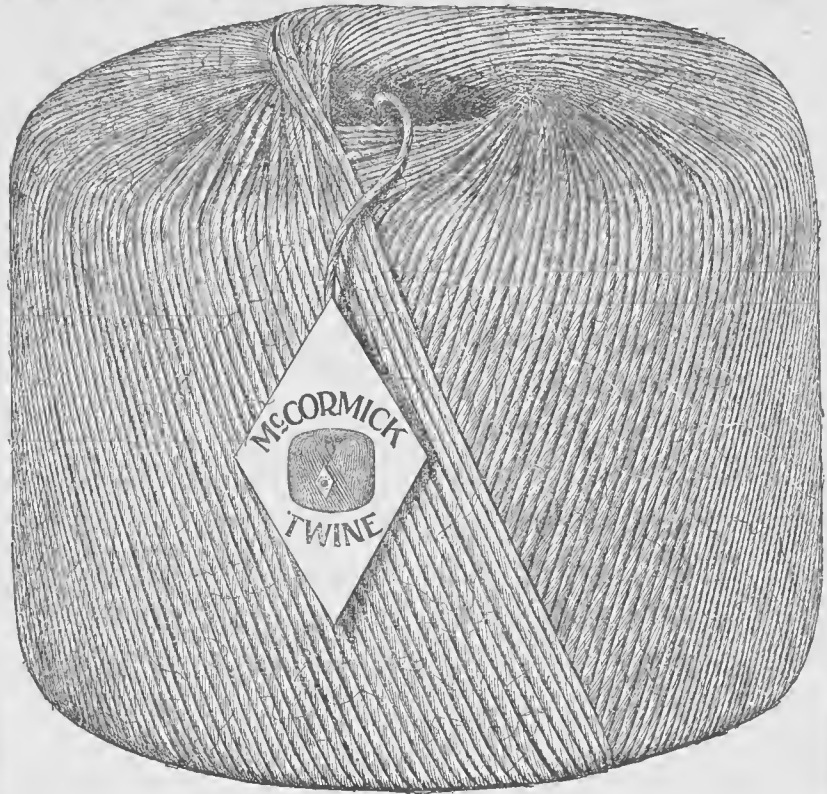
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Sired by Aberdeen 2nd, from 8 months to 18 months old, for sale. My stock bull Aberdeen is also for sale, as I have kept him as long as is prudent, and any one getting him will make no mistake, as his stock will prove.

Write for particulars.
Wm. CHALMERS, Hayfield, Man.

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Length

Right
Strength



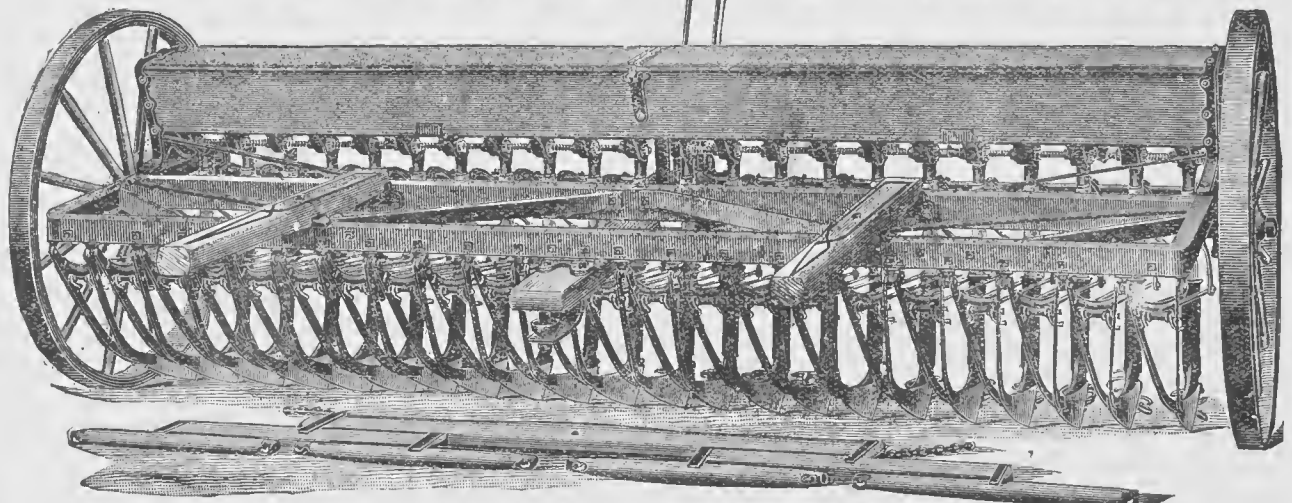
Spun
Right

Baled
Right

It is made at our immense new Twine Mill, which has the latest and most improved machinery the world has produced.

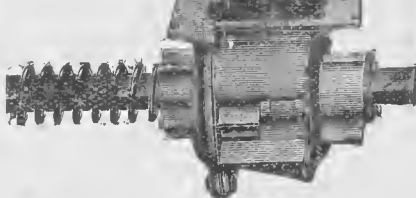
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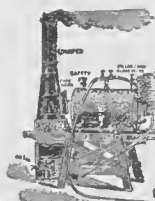
The closest fitted and most accurate feed in existence.

Lathe fitted, and the spring keeps all parts together even after years of wear.

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Sell from \$10.00 to \$45.00. Made of boiler steel. No flues to rust or leak. Can't blow up. Guaranteed to cook 25 bu. feed in 2 hours and to heat water in stock tanks 200 feet away. Will heat dairy rooms. Catalogue and prices mailed free.

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IS THE STANDARD
STEAM PUMPS, AIR LIFTS,
GASOLINE ENGINES
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THE AMERICAN WELL WORKS
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149 SONGS

Complete with words and music. A grand aggregation of musical gems, which every lover of music should possess. The songs contained in this book comprise the most popular sentimental, comic, operatic and Ethiopian selections, and bear in mind that both words and music are given. Bought in the ordinary way, in sheet music, these songs would cost as much each as we ask for the whole collection, neatly bound in a handy book, which will be sent postpaid for only ten cents silver. McFarlane & Co., Toronto.





While our columns are always open for the discussion of any relevant subject, we do not necessarily endorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give their names—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

About the Peace River District.

Thos. Johnston, Boissevain, Man.: "Can you give me any information about the Peace River Country? Are there many settlers there? Do the cattle run out in the winter? Can wheat be grown there? What are the chances of a railway?"

Answer.—Far-away hills are always green, and when somebody who has lived in the Peace River district a long time says it is a great country, there is no one that can successfully contradict him. E. J. Lawrence, who went there 20 years ago as an instructor at the Mission Station, brought out some specimens of wheat he raised there, which were noticed in our issue of Nov. 20, 1898. But he stayed out himself, and got killed by a threshing machine accident last year, near Edmonton. The distance from Edmonton to his old place is put at 350 miles and, as we recollect the facts, the wheat grown was Ladoga, or something like it. Farming settlement will reach that district in time without doubt and a railroad be built some day. Try the country round Edmonton to begin with and if that is not far enough Northwest to suit, you will find plenty of room further out, and get the best of the country to pick from.

Harrowing Land Before Seeding.

W. H. R., Wapaha, Man.: "Would you advise harrowing land before seeding that had been well harrowed in the fall?"

Answer.—In your part of the country, the soil is usually light and south-western winds prevalent in seed time. For that reason mainly it is best to stir the surface as little as possible. The only reason why anyone who uses a good deep seeding drill should harrow before seeding is the presence of foul seeds near the surface. But if you harrowed wisely last fall, part of those seeds would germinate then. If you seed deeper than an inch and a half your grain will start at once. There may be plenty of baby weeds among that grain, but a round of the light harrow in mild weather will kill them, if taken at the seed leaf stage, without injuring the grain. You could do the same thing ten days later and kill a lot more. If you let those weeds get ten days older your harrow will do them little harm. Of course there is risk of winds then also, but they do not injure rooted grain so much as is the case at an earlier stage. Many good farmers in Dakota sow east and west, as the winds cannot so readily carry off the mould when blowing across as when blowing along the seed rows. Buckwheat is an exception to the general run of weeds. It usually comes later and the plants are very soft. We once advised a Napinka farmer to turn the harrows upside down on a field of oats four inches high, and pretty thickly seeded with buckwheat, doing only an acre as an experiment. He went over the whole field, spoiled the buckwheat, but did no harm to the oats. The dust blanket he made proved a capital mulch and of much benefit to his crop.

The Disc Drill.

R. J. King, Whitewater, Man.: "In your December 20th issue H. C. C., Boissevain, asks information in reference to disc drills. I have used a 17 disc drill for two years; the first year I sowed 240 acres, and last year I sowed 255, and lent it to sow more, and it has not cost me five cents for repairs. It will sow in all conditions without clogging and will put the seed down better and easier than the shoe drill. On my land the discs always wear sharp. It is a good cultivator at the same time. It moves the whole top soil as it passes over the land. I think they easily make up for the extra price. "Another valuable implement is the sub-surface land packer. I used one the past season and am convinced it paid for itself several times over in the one crop. I would like to hear opinions from other farmers who have used the packer."

Note.—Come again, R. J., whenever you have anything to tell us in the same business like way. We shall be glad to hear from anybody else on any subject in the same style.

Planting Corn.

Subscriber, Portage la Prairie, Man.: "I am desirous of planting corn to feed in the stalk to horses. How would you advise me to plant it, with an ordinary drill, six inches apart, so that it would not grow too rank, or in rows, two or three feet apart? What is the best kind to use?"

Answer.—We would infer that it is your intention to feed the corn stalks uncut to your horses. In that case it will probably be best to sow with every spout of the drill. If sown in rows 3 ft. apart the stalks grow strong and heavy and require to be run

through a cutting box before the horses will eat much of it. So much for the convenience of feeding. When we turn to the feeding value of the two kinds of corn, we find that that grown in drills three feet apart is so much superior to the closely grown corn that it is the best in the end, even if you need to have it cut. Nothing is gained by crowding corn, as when closely grown it gives bulk without a corresponding feeding value. An early ripening variety is best, as North Dakota Flint, Longfellow, or Pearce's Prolific.

Growing Elderberry Bushes.

C. H. A., Bowden, Alta.: "Will elderberry bushes grow in this country? Will they start from sun-dried berries? I intend to try."

Answer.—It is worth while, perhaps, to try, but it is not very likely to have a successful result. Put in your seeds and let us know how they pan out. There will be no money wasted and some good done.

Best Place to Go Ranching.

A "Subscriber" asks where is the best place to go ranching on a small scale. He gives neither post office nor name. If he will send his name in compliance with the requirements of the heading of this column, he will get an answer to his question.

Seed Oats from Edmonton.

R. J. Pritchard, Roland, Man.: "Whom should I apply to in the Edmonton district for seed oats? What rates do the C.P.R. charge on car lots? Farmers here want to club together and purchase car lots, delivered at Carman."

Answer.—Farmers in the Edmonton district having seed oats in quantity to sell should use the advertising columns of The Nor'-West Farmer, as well as correspond with Mr. Pritchard. In case no farmer offers these oats, we would suggest that you write to Thompson, Sons & Co., of the Grain Exchange, Winnipeg, who for a trifling commission could buy on as good terms, or even better, than you can do yourself. You should write without delay, as oats are now plentiful at Edmonton, and you may do better now, when the dealers want the cash. You must clean over again, no matter whom you buy from, as there are stray weed seeds in the very best samples. About 38c. to 40c. will be the figure at Carman.

Black Cattle.

A. H. S., Yellow Grass, Assa.: "Is there a black breed of cattle in Scotland called Durham?"

Answer.—No.

Agin the Brome Grass.

Kenneth McIvor, Roselea Farm, Virden, Man.: "The three reasons Mr. Bedford gave in your last issue for Brome being unquestionably the best pasture grass, might pass if given by an ordinary farmer, or even Mr. Bedford, as plain Mr. Bedford. But as Superintendent of the Brandon Experimental Farm, the case is altered. According to his reasoning Brome starts earlier, grows much quicker, when eaten down, and is green much later, making a total growth for the season (according to his tests from 1891 to 1896, not including the lowest yields of both Rye grass and Brome) of 1 ton 1283 lbs. Rye grass, on the other hand, though in Mr. Bedford's opinion is later to start, slower to grow, etc., gave an average yield of 2 tons 1310 lbs., and since the value of a grass greatly depends on its feeding properties, the analysis of those grasses, as given by F. T. Shutt, chemist of the Dominion Experimental Farms, places Western Rye grass nearly 1-3 per cent., in the green state, higher than Brome in flesh and milk forming properties. So that taking the extra yield and feeding properties of Western Rye grass into consideration, it leaves a total balance in its favor of about 88 per cent. Therefore to the man dependent on his farm for his bread and butter, there is an apparent inconsistency in Mr. Bedford's teaching which will stand a little explanation."

An Implement Shed.

John Zinkhan, Regina, Assa.: "Can you give me an idea of the size generally in use for an implement shed on a farm of 320 acres?"

Answer.—There will be many different ideas on a question like this. You can hardly be wrong in building 50x20. Width is important. Turn the face to the north, so as to keep the implements out of the sun. A sliding door, on one or two divisions, would be useful to keep out snow.

Flax on Breaking.

W. E. Evans, Rapid City, Man.: "Will you or some of your readers give me advice with regard to handling flax on breaking?"

Answer.—Flax on breaking has always been a favorite crop with the Mennonites. They were familiar with it where they came from and their land seems to suit it, but the English-speaking farmers alongside have rarely grown it. Some men from Dakota, where flax has been raised in that way, are laying themselves out to grow it here on breaking. It was a failure last year. The price of flax is very high now and those who had it to sell last year did well. There is a special risk in buying flax seed. It is more or less mixed with foul seeds, as a good

many have found to their cost, and it is more difficult to clean than any other seed. Unless you have some one near you who can keep you right all the way from seedling to harvest, we can hardly advise you to grow flax as a regular crop. It is all right with the right men.

Fence Posts and Coal.

Wellwisher, Langenburg, Assa.: "1. Can you give addresses of anyone in Winnipeg dealing in oak fence-posts, also price of same? 2. What is coal worth on cars at mine or at Winnipeg, and (roughly) freight on both posts and coal to this point?"

Answer.—We have referred your enquiries to the Rat Portage Lumber Co., who are dealers in coal and wood supplies, and you will doubtless have had direct answer from them ere this.

Automatic Stock Counter.

P. Cook, Revelstoke, B.C.: "Please let me know where I can get an automatic counter to count sheep or cattle going in or out of stable or enclosure."

Answer.—F. S. Burch & Co., 178-180 Michigan St., Chicago, Ill., have a small register for counting sheep and cattle which registers 999. The counter is automatic, and the price is \$2.50 each.

The Farmers' Mutual Hail Insurance Co.

Enquirer, Neepawa, Man.: "In 1899 I took out a policy in the Manitoba Farmers' Mutual Hail Insurance Co. In the fall I paid my premium, and when the second assessment was made, there was a rebate allowed me, but it was not paid to me. On the 27th April I surrendered my policy, also saying I would take out a fresh policy for 60 or 70 acres if they would allow the rebate to go on the premium. On account of the poor prospects at the time I did not do so. The company did not return the old policy, so that in the event of being hailed I would have had no hold on them. In fact, I would never have thought of doing so. The question is, am I liable, if so, for how much? I enclose letters which may throw a little light on the subject."

Answer.—The letters that passed between this enquirer and Mr. Graham, manager of the company, make the matter clear enough. Mr. Graham promptly replied to "Enquirer's" letter of April 27th, stating that the rebate would be carried forward to his credit on next year's account, and enclosed a blank application for renewal on a basis of the actual acreage of the 1900 crop, which change could be made at no cost to the insurer. The remainder of Mr. Graham's letters are equally explicit and all through written in a spirit of good faith. It was, perhaps, open to "Enquirer" to change his mind when he saw that the crop prospects were poor, and take his chance of collecting last year's rebate in some other way, but it was no way to get honorably out to allow the thing to lie over as he did. The blame is not with the company, but himself. He cannot sit on both sides of the fence and is in honor bound, we think, to settle up. If he had been hailed and the company refused to pay, the fault would have been his, not theirs. Had he told them his crop was not worth insuring, that would have been another way out, for the rebate in their hands would have covered his actual indebtedness. We speak thus plainly because The Farmer has denounced the crooked ways of the first directorate, but feels bound to defend the new men, when we think them in the right. The company is certainly not to blame in the least for this unpleasantness.

Hungarian Grass.

Subscriber, Rathwell, Man.: "Can you give me any information on growing Hungarian grass for hay. Would it do to put it on land and then take off a crop, then plow early and put wheat on next year? Does it make good hay for horses? How much seed per acre? Is it suitable for this country?"

Answer.—Your proposed plan of cropping would do quite well. That class of grasses is not a safe feed for horses. Partial use of it would be safe. The amount of seed per acre will depend on the percentage of vitality in the sample you use. Grown for seed, 4 bus. for hay, 2 bus. per acre is about the proper quantity, though some prefer to sow a little more. It does quite well in any season favorable to the growth of other grasses.

Temperature of Water for Creaming and for Stock.

W. L. McKenzie, Balmoral, Man.: "1. What is the proper temperature at which to keep milk in winter for creaming purposes? 2. What is the proper temperature for water, in winter for (a) milch cows; (b) horses?"

Answer.—1. It is just as necessary to keep deep pails, or shot gun cans, in ice water in winter as in summer. The water in which the cans are set should be kept constantly as near to 40 degrees as possible. With shallow pans as low a temperature as possible is best, but don't set them where the temperature is so low that they freeze.

2. There are so many conditions that have to be taken into consideration in connection with this question that it is a difficult one to answer satisfactorily. In a general way water at from 50 to 60 degrees Fahr. will be found very suitable.

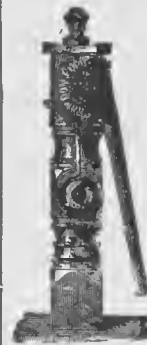
Cows on Shares.

R. A. C., Beresford, Man.: "I have some cows to let out on shares. I would let them

HORSEMEN! THE ONLY GENUINE IS GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of
The Lawrence, Williams & Co.
Sole Importers & Proprietors for the
U.S. & CANADAS, } CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Ont.



Riesberry's Pump Works

BRANDON, MAN.

We have now ready the largest stock of Wood Pumps in the West. We have all sizes of

WOOD PUMPS, CATTLE PUMPS, PORCELAIN CYLINDERS, &c.

Every Pump warranted. Don't buy until you have had our Catalogue and prices.

RIESBERRY & CO., 6th St. Brandon

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Is used by Progressive Farmers everywhere



THE McCOLM SOIL PULVERIZER AND COMPRESS FIELD ROLLER.

It crushes and grinds all clods, packs the soil without making a smooth, hard surface, hence it is not blown away with wind, or washed off with rain; no parts to wear or get out of repair. For particulars, address—

The H.P. DEUSCHER CO., Hamilton, Ohio.

Or—

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We handle the widely-known McCOLM ROLLER. The Rock Island Plows, Disc Harrows, Potato Diggers, etc. Also Wagons, Feed Cutters, Grain Crushers.

Watson's Pneumatic Feed Elevator saves time and labor, and thus saves money. THE BEST IS THE CHEAPEST.



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For holding stock the "Page" is the only reliable kind. It is used on the Largest Stock Farms in Canada; equally suitable for small or large stock. We now make our own wire. Could not get good enough before. It is twice as strong as that in other fences and better galvanized. Our Fencing is shipped from our factory ready-made, and our local representative can put up a string of it for you in short order. Prices lower this year.

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WALKERVILLE, ONT.

D. ROSS, Box 633 W'pg. General Agent. Fence in Stock.

Samuel Lowry, Roland, Man., Jan. 18, 1901:—"The Nor'-West Farmer is too good to miss even one copy."

BOLE'S CONDITION POWDER

In 1 lb. packages, 25 cents per package.

A capital tonic, diuretic and vermifuge

For Horses, Cattle,
Sheep and Hogs.

The Best Medicine made for Horses.

out for three years. What share should I receive at the end of three years. Would it be better to let them out for five years?"

Answer.—We are afraid your plan of letting out cows for a term of years will not be very satisfactory to you. All depends upon the man who gets them. Will some of our readers, who have had experience in letting out cows on shares, kindly give R. A. C. the details of the plan usually followed?

Cure for Stiffened Pigs.

R. J. P., Roland, Man.: "I have seen many inquiries in the columns of The Farmer about hogs becoming stiff and losing power to move. I have had a good deal of experience along this line during the past three or four years. I claim that it is generally caused by heavy feeding in conjunction with close confinement in damp quarters. It seems to be worse when barley chop is fed. I think indigestion sets in, the hogs then become feverish, they soon stiffen up and refuse to eat. My cure is to drench each hog with half a teaspoonful of salts, half teaspoonful of copperas, and half teaspoonful of saltpetre twice a day. Rub over the kidneys well. Give plenty of dry bedding, feed hauled corn, move the hogs about. When strong enough turn them out during fine days. They also want grit and charcoal. I have never lost a hog where I gave this treatment."

Experience Wanted.

A. J. S., Oxbow, Assa.: "Would you kindly give me your opinion, or the opinion of an expert ploughman, on the big steel spring clevis on the three-horse double-tree on the Bradley X-Ray sulky-plow. Should it be used or not?"

Answer.—Will some of our readers who have used this clevis give us the benefit of their experience?

Pig-Weed Seed.

Enquirer, Keyes, Man.: "Has pig-weed seed any feeding value? I had some finely crushed, and though the pigs eat it when mixed with other grain, they don't seem to like it clear, unless very hungry. I see that analysis shows that it is rich in food value, but can the hogs assimilate it when crushed and fed raw?"

Answer.—The hog generally digests a larger percentage of our concentrated foods than other animals do and should be able to take the maximum value out of pigweed seed. If he can digest it, he can assimilate it and there is no doubt about his ability to digest it. It may not be to his liking when fed alone, hence it is better to mix it with other food. Some of our readers have found it best to soak the seed without grinding it until it is soft and milky. It certainly has good feeding value. See Jas. Dale's letter in this issue.

Combined Ice and Dairy House.

D. Leitch, Rathwell, Man.: "In your Dec. 5th issue I notice account of where a combined ice and dairy house has been tried and found satisfactory. I intend putting up a small house next spring for dairy purposes and would like to have a few questions answered by one or more who have tried a building like this.—How long did the ice last in the well? What became of the water from the ice? Did it soak away or was it pumped out of the well? How do you think this would do on a gravel ridge?"

Answer.—The main thing is to keep out air, and if drainage through gravel can be got, so much the better. The water must be taken off as it melts. If there is no other way to get rid of it. It must be dipped out of a low corner or a hole in the centre, with a pail. Everything depends on your individual care. One man will make the same ice last two months longer than another. Will some of our readers favor us with their experience?

A Hayseed Wants Light.

Hayseed, Qu'Appelle Valley: "I have read with much interest the letter of Senator Perley, in your Correspondence columns, in the Jan 5th issue. I have tried steer feeding myself, but have never fed up to 20 lbs. concentrated feed in one day. But the idea has struck me that the Senator himself might be able to throw a great deal of light on this matter. He is not in the position of a half section farmer, struggling to get through a long day's work before dark, even in summer. On his large farm he must, in the many years he has been there, have fed many good heasts, and will, of course, have been acting on the excellent advice he gives to us smaller men and have made a careful estimate of the value of the feed he gave those steers and the profit and loss on his ventures along that and other lines of farming in which he has been so long engaged. I can hardly conceive of a greater service he could render his neighbors, and in fact all of your readers, than to tell us what kind of stockers he thought, how long he kept them, how he fed them, how much he fed and how they sold, with the profit or loss by

his own estimate on his various ventures. I am sure you, Mr. Editor, would be as much pleased as myself to hear again from Senator Perley. Criticism does not go far with me, but when a practical man has the floor and favors me with his experience, I never tire of hearing what he is pleased to tell me."

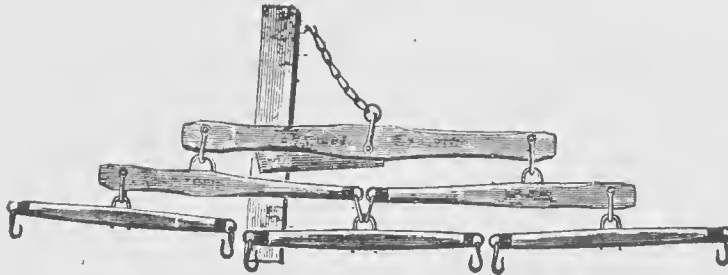
Applying for a Patent.

Subscriber, Deloraine, Man.: "I would like a little information as to how and where to apply for a patent, on a piece of farm machinery."

Answer.—Address Patent Office, Department of Agriculture, Ottawa, Ont., asking for full information as to how to proceed, and it will be sent to you.

Three Horse Eveners.

B. T. I., Morris, Man.: "I enclose you a cut of this sort of evener, which can be made heavy enough to withstand the strain of any heavy load, and which any handy farmer can get up himself with the help of a blacksmith—possibly rough, yet strong. To attach to a wagon an offset is required. This is a strong piece of flat iron, say 3-inch thick by 2 1/2 inches broad, with two holes about a foot apart. By one hole it is fastened to the pole of the wagon with a bolt through the draw pin hole, at the other hole a clevis is used, say 2 1/2 or 3 inches wide, to take in the triple tree and the offset, the triple tree on top. The length of the offset may be about 18 inches, with a slight bend near the draw pin hole to allow for the evener clearing the head of the bolt. From the clevis a chain is run back either to the front bolster at the centre, or through on top of front axle right through to the middle of the hind axle. This plan is the readiest when a long chain can be got. In the latter case there is less chance of side draft. A strong tough piece of hard wood can be



used instead of a chain, an iron plate, with steel bolts through it being used to keep it from splitting. One bad feature has to be mentioned. When the horses are turned to the side on which the chain is on, the chain, of course, slackens, and this lets the evener go forward to a certain extent, probably enough to allow the neck yoke to slip off the end of the pole, consequently it is absolutely necessary to fasten the neck yoke on so that it cannot slip off in this way, when the wagon is turning.

"This evener would seem to me to be both simple and easy to get up. Hooks and clevises can be bought ready-made, and the necessary U irons for centres can be made by the blacksmith. The distance apart of the holes in the offset depends on the length of the single trees—with these 28 or 29 inches long, 12 inches would be about the right thing—if longer than that, then a greater width is required. This can all be figured out, or the single trees and levers can be placed on the ground and measured off exactly. With single trees 28 inches long the ordinary 4-foot wagon double tree would suit for a triple tree, if good and strong, necessitating only the two levers to be got, to complete the set."

Feeding Pigweed Seeds.

Jas. Dale, Grund, Man.: "As quite a number of farmers are anxious about feeding pigweed seed, I will give you some of the practical results of feeding it the last three months. My oat crop was a failure, and as I had only about 200 bushels of barley, and a large stock to feed, as well as 26 pigs to fatten, I made up my mind at threshing time to gather up all the pigweed seed I could conveniently store away, as an experiment, to help out this short supply. I purchased a 45-gallon boiler and started to feed my pigs one-third ground tailings and two-thirds pigweed seed. I fed this for about two weeks and then gradually put them on the pigweed seed alone. I fed them this about one month, and now am finishing them for the last two weeks on one-third ground wheat and two-thirds pigweed seed, hulled and fed warm. They have done well and I will let you know when I sell how they have turned out."

"Now, as to feeding it to horses. I am feeding ten head on less than 5 cents each per day. I take one-third of a bushel of ground wheat tailings, and two-thirds of a bushel hulled pigweed seed hot from the boiler, and mix the two together. This gives

each horse about a gallon. I feed this three times per day and all the straw the horses will eat up clean. In a day I feed one bushel ground wheat, or screenings, and two bushels of the pigweed seed for the ten head. In summer I feed it to hogs, but have it ground and put about two pailfuls of shorts or bran to a coal oil barrel full of this ground seed and let it remain covered with water for two days before feeding, and have been well satisfied with the results."

"Geo Playfair, of Balduf, tells me it is No. 1 feed to fatten sheep, when fed dry. He is one of our successful feeders in mixed farming. My hens never did better, and they are fed two-thirds of this and one-third ground tailings. I am feeding it to my milking cows. Do not think it is as good for producing milk as bran, but they have materially improved in their milk flow and are in much better flesh than when I started to feed it. To any farmer who may be short of feed, I would advise him to gather up this seed. As but few of our farmers burned their straw last fall, the seed under the snow will be as good as when the machine left. Oats are from 40c. to 50c. per bushel, and this seed is equal to at least one-third the price of oats when fed to horses or any other stock. But either boil or grind it for all stock except sheep, and if ground, scald in winter before feeding."

A Three Horse Wagon Tongue Wanted.

J. S. D., Morris, Man.: "From time to time I notice enquiries in your valuable paper as to the best three-horse evener for a wagon or other machine, that will prevent side draft. Now, it is quite impossible to invent any contrivance that will do this when the pole is in the line of draft, as it is obvious that the two horses will pull the machine over against the one. Now, I know I am treading on dangerous ground, for nearly every farmer of my acquaintance has some contrivance, more or less complicated, which he thinks does what is scienu-

tifically impossible. The only way three horses can be put on a wagon without side draft is to have a tongue to one side and the point of draft in the centre, and I am surprised that no manufacturer has so far made a wagon that can be readily changed for three horses, which is often a convenient and effective team."

Gestation Table Wanted.

O. K. O., Edmonton, Alta.: "I have somewhere seen a table showing the period of pregnancy of different animals, arranged in such a way as to be used for memoranda purposes in connection with the breeding of the stock of the farm. Could you tell me where I could get hold of something of this sort, as I consider it very convenient and valuable?"

Answer.—The gestation table which occupies the last twelve pages of our premium book, "Things Worth Knowing," is the very thing for which you are asking. If our readers will use this table, they will find it, as our correspondent puts it, "very convenient and valuable." In order to answer any enquiries as to its purpose and the way in which it should be used, we will explain briefly that the name of each animal on the farm, when bred, should be entered in the column for that purpose opposite the date of service. Then, whether she be mare, cow, sow or ewe, a glance along the line will at any time show the date upon which she is due. No figuring out of the matter is necessary. A good many of the best farmers have used gestation tables for years, and a trial will be all the proof needed as to its convenience and value."

Stacking Hay With a Sweep.

Greenhorn, Man.: "Could you inform me through your valuable paper, the methods adopted for stacking hay with a sweep?"

Answer.—A sweep is best likened to an enormous rake, the backbone of which is a stick of timber about 20ft. long and 10in. in diameter. In front are teeth, about 5ft. long, rounded on the under side at the point, to run on the ground, and placed in holes bored in the timber 18 to 20in. apart. They are about 2 or 2 1/2 in. in diameter. Similar poles are put in as uprights about every three feet, at right angles to the teeth, to catch and hold the hay. This big rake, or sweep, is drawn by a horse at either end, attached to the end of the timber by a piece

of rope long enough that the horse clears the teeth. The sweep is run along a winnow of hay until a load is obtained, when it is taken to the stack. When the hay is in place the horses are turned round and the sweep drawn away from its load. When one layer is down for a stack, the sweep and its load are slid up on top of it by means of poles, some only use one pole.

Probable Gain by Steers.

Enquirer, Shelburne, Man.: "I would like to know whether any of your readers, who have been stall feeding, could give me an idea of the probable gain by two-year-old steers wintered on the following ration:—Hay, wheat and oat straw, grain—equal quantities of wheat and oats, chopped. Steers are to get the first month, 3 or 4 lbs. grain, the second month, 5 lbs., the third month, 7 1/2 lbs., the fourth and fifth months, 10 lbs., with sufficient flax seed to halauce the ration, say, roughly, two pounds per day."

Answer.—Much depends upon the quality of your steers and the care and attention they get, as well as the food. If your steers are well bred, you might confidently look for an average gain for the whole period of about 1 1/2 lbs. per day. If your steers are not of the best for beef purposes, you may not average much over a pound a day. Some of the steers will do more than these figures, some less.

Charges for Gristing Wheat.

John C. Slater, Prince Albert, Sask.: "I am requested by the Farmers' Institute here to find out how much flour, bran and shorts is allowed by the flour mills for gristing at the country mills in Manitoba."

Answer.—Perhaps as good an example as can be found anywhere in Manitoba is the contract between Robert Muir & Co., of Winnipeg, and the Municipality of Westbourne for a roller flour mill that was erected at Gladstone some 8 or 10 years ago, and which is still in operation. This mill was bonused. If cash is paid for grinding wheat the charge is 12 1/2 c. per bushel. An unboused mill might charge as high as 15c. When toll, in kind, was taken the farmer got 32 lbs. flour and 12 lbs. offal. Cash is the usual rule.

For wheat well cleaned and weighing 60 lbs. to the bus, the return agreed on is 40lbs. flour, 18 lbs. bran and shorts and 2 lbs. for invisible waste. For a lighter wheat less flour and more offal is agreed for, for wheat weighing 58 lbs. a bushel, 37 lbs. flour and 20 lbs. offal are given. In no case is it assumed that the farmer will get back the flour from his own wheat. This leaves room for dispute over the quality of the wheat offered, for it would not pay the miller to handle damp or smutty wheat on any terms. This contract also prohibits the farmer from grinding large quantities of wheat, to be sold in competition with the local trade by retail. He may grind 30 bushels at once, but if he goes beyond that the miller may refuse to handle any more wheat for him.

Senator Perley's Criticisms.

The Farmer inserted Senator Perley's letter in last issue without any remark of its own. Since then Mr. Mitchell, whose teaching was challenged by Mr. Perley, happened to drop into our office. He says he sees nothing in his paper to justify the remarks made by his critic, and it is only by reading into it what he never put there that the deductions reached by Senator Perley can be reached.

With reference to the direct teaching of Professor Robertson, we do not understand him to teach that the only difference in result between feeding a cow, say wheat straw and feeding a well balanced and liberal ration, would be in the amount of the product. As we understand him and the teaching of experiments, a poor diet would produce a low percentage of butter fat as well as a poor total of results, and a more generous ration adds something even to the butter percentage of a cow previously fed on a low ration, but there soon comes a stage at which the fat percentage alone cannot be increased by the most liberal treatment, though the total amount of milk may continue to increase.

On the question of profit or loss from feeding a steer 20 lbs. a day of mixed concentrates, along with cut straw, we content ourselves meantime by quoting from J. G. Haney, of the Kansas Experiment Station, who in a reply, dated Jan. 10, 1901, to an enquirer asking for a suitable ration for a 1,000 lbs. steer, says:—

"A 1,000-pound steer of good quality would eat about 25 pounds of corn, bran and cotton seed meal, in the proportion of 10 parts corn, 4 of bran and 4 of cotton seed meal, per day, and perhaps 6 pounds of mixed hay. However, the amount of both grain and hay eaten will depend largely on the individual as well as the time the cattle have been on feed. Care must be taken in getting cattle on such feed as this. From the beginning, it should not be done in less than one month. A steer while fattening should be fed all it can eat up clean. After it has been fairly introduced to full concentrated feed it eats very little roughness. All changes of feed should be very gradual."

On the question of profit and loss it may be as well to refer Senator Perley and our readers to the letter of "Hayseed," in this issue. The reply to Mr. Bryant to which Senator Perley refers in his criticism, did not undertake to deal with the profit and loss on steer feeding. It was only meant to show what in our judgment a good steer in the latest stage of feeding could turn to good account when fed along with chopped straw. The profit or loss will be a useful tonic when the other half of the case is disposed of.

The Control of Glanders.

By T. V. Simpson, Yorkton, Assa.

Glanders is a contagious disease of the horse and transmissible to other animals, including man. It is due to a germ infinitesimal in structure, but not able to withstand severe destructive influences it was once supposed to exist through. It is occasionally fatal to human beings and is easily communicable to them through cuts or scratches upon the hands or face or through the delicate mucous lining of the nose or eyes. The human glandered subject is a pitiful sight to behold, but fortunately, on this continent such cases are not common. The bovine species are naturally refractory to infection of the glanders bacillus.

The three principal symptoms of the disease in the horse are:

1. Swelling of the lymphatic glands at the base of the tongue and between the lower jaws, the glands being small, hard and usually deep seated; although in advanced cases they may become quite large. As a rule those on one side only enlarge; the discharge from the nostril taking place from the same side.

2. Ulcers upon the lining membrane of the nasal cavity, quite characteristic and a valuable aid as a diagnostic to the expert.

3. The discharge, usually from one nostril only, is sticky and resembles the white of an egg. Mixed with it is the debris from the ulcers. It adheres in dried flakes around the margin of the nostril. In this condition it is virulent if transmitted to healthy animals, and gains an entrance into the system either through inoculation or invasion of the delicate lining of the nose or eyes. Sometimes the discharge is tinged with blood, while again it may assume a dirty brown or greenish tint. The former is seen in the early stages and is symptomatic of an ulcer breaking down the walls of a small blood vessel, while the latter is seen in the more advanced cases.

PARCY.

This is but a form of glanders. The lymphatic glands on the inner side of the hind legs or other parts of the body being the stronghold of the germs. These glands, after invasion by the glanders bacillus, become hard, indurated and knotty, and ultimately some of them develop into an ulcer that constantly gives off a discharge, virulent and capable of transmitting the disease to other animals.

Glanders may become localized in the lungs, or other organs, giving rise to symptoms such as cough and emaciation, quite often seen in glandered subjects.

LATENT CASES.

Some glandered horses show no clinical symptoms whatever. These are the mild and latent cases and are those to which too little attention has been directed. Glanders is far more prevalent than is generally supposed. A large percentage of cases are of the mild type and help wonderfully to keep up the spread of contagion. Many of these cases never develop into clinical glanders unless exposed to debilitating influences, and even then clinical symptoms may not appear.

RECOVERY FROM GLANDERS.

There are recorded cases of recovery from glanders. Such a statement might seem very startling to the general layman, but recent developments have proved such to be the case. Yet it does not alter the fact that a large number do not recover, but develop into severe clinical cases, highly infectious. We should take into account the fact that complete recoveries may take place and that the owners may receive due credit for such a possibility of recovery. On the other hand we should be alive to the fact that there is also a chance of the disease assuming the severe form.

VALUE OF MALLEIN.

The value of mallein in diagnosing latent cases cannot be over-estimated. It is not infallible, but in the hands of a competent practitioner, it is a most valuable diagnostic agent and serves to differentiate the diseased from the healthy better than any other means at our command.

Clinical cases need not be tested, as

there is nothing to be gained by testing animals showing well marked symptoms. But "in-contact" animals, or those in whose stable a clinical case has been for some time, should be tested, and it is usual to find one or two react. Then, again, there are diseased horses that are running at large with other horses, but the danger of these horses spreading the contagion is not nearly so great as when they are brought into contact in a stable or shed. All horses that have been exposed to infection in a stable, where such exposure is considered within the range of probability of contagion, and those who have by long association in the air been constantly with glandered subjects, should be tested with mallein. It is undoubted that some animals so exposed will react to the test, and such as react should be designated so suspected.

Cases of glanders in the advanced stages are not very common, but we are forced to admit that glanders is far more prevalent than is generally supposed, and that the majority of the diseased animals are harboring it in its mild or latent form, and possibly helping to spread the contagion, while we are destroying those only that develop external symptoms.

PROTECTING PUBLIC HEALTH.

In some provinces, states and countries the use of tuberculin is made compulsory to diagnose tuberculosis in cattle, and animals which gave the reaction are condemned and destroyed, or quietly disposed of. I am strictly opposed to compulsory and wholesale slaughter of animals not showing clinical symptoms of tuberculosis, not that I underestimate the value of tuberculin, but its use should not be made so indiscriminate as it has been in some of our civilized communities.

The same applies to mallein, which, although not infallible, yet when judiciously used may be of great value to the community at large. I believe in protection to the public health, and I think we cannot be too zealous in work which applies to health protection. But I equally believe in protection to the owner of diseased animals and I think that his side of the question has too frequently been overlooked.

The indiscriminate slaughter of reacting animals should not be compulsory, but those showing clinical symptoms should be removed and destroyed at once. The mild and latent cases which are detected with mallein should be dealt with in a way entirely different to the clinical ones. Recovery is possible and while we must guard the public health, yet, on the other hand, we must not forget to give the owner credit for a possibility of recovery.

STRICT ISOLATION.

The strict isolation of all reacting animals that show no clinical symptoms is necessary, as these animals are a possible source of contagion, and we find from experience that latent cases are far more numerous than was once supposed. While isolated they should be kept in sanitary surroundings, subjected to disinfection periodically and retested with an increased dose of mallein. Those animals that fail to react upon a second test may be considered as free from glanders, and any that show clinical symptoms during quarantine should be removed and destroyed at once.

There is room for vast improvement in the regulations for the control of contagious disease in animals, and while the public health is to be carefully considered, the owners of diseased animals should receive due credit for any chance there may be of the least possible loss.

—The short course in agriculture at the Wisconsin Agricultural College shows conclusively that farmers' sons in Wisconsin are looking for practical training in scientific agriculture. This course was started in 1886 and the attendance has grown steadily until this year the number of students in attendance is 295, an increase over last year of nearly 20 per cent. When are the sons of Manitoba farmers to have a chance of taking a short course in agriculture?

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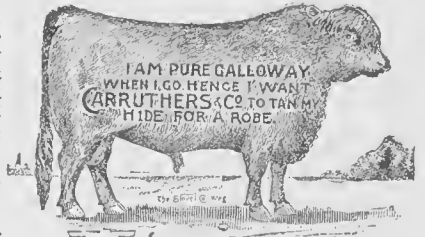
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The Partridge.

An interesting incident to me the past season was seeing, on two occasions, a partridge sitting upon her nest in the woods. It was an incident which one does not witness every season.

One of the partridges had come up out of the dense woods and nested near a path on the edge of a large cemetery. A bevy of schoolgirls, after wild flowers in May, first discovered her. Their skirts almost brushed her before she stirred. Her nest was at the foot of an oak a few yards from the open ground. She could command the approaches in all directions, and fly whichever way she chose.

My friend and I approached to within a few yards of her, and stood and regarded her to our heart's content. Her color so blended her with surrounding objects that she was quite invisible. On such occasions the bird is as motionless as a stone, till she springs from her nest and is off on booming wing.

We did not disturb her this time, but withdrew as gently as we had approached. The brood was soon out and off, and I hope prosperous.

The other partridge was sitting upon her nest in the woods near an old road but little used. As it was late in June, it was probably her second attempt at rearing a family. This is the more probable as she was sitting upon only five eggs, when from twelve to fifteen are the usual number. Indeed, it may have been her third attempt.

Under the guidance of Martin, a boy who lived near by, we approached and observed her from the road a few paces away. Martin had a task to pilot our eyes to the exact spot. One had to pass his eyes over the ground as he passes his hand over a table in the dark to find a pin.

She, too, was at the foot of a tree, but the red leaves and the gray bark and the brown fragments of wood were all copied in her plumage.

Presently we made her out, and then we wondered we had not seen her before. After some moments we took a few steps toward her, when she went humming away. As she left the nest, she fanned the dry leaves so with her wings that several of them sprang up and settled upon the eggs, quite covering them.

I have observed this before. It is probably the result of design on the part of the bird. The nest is usually little more than a depression in the dry leaves, but its simplicity may be the result of a shrewd wisdom. If the bird ran from her nest before taking flight, she would seem to run less risk of breaking her eggs by the sudden withdrawal of her feet from among them; but in that case they would not be covered up by the leaves, as they usually are when she takes flight directly from the nest.—Essays of John Burroughs.

A Gopher Poison.

At last an effective way to dispose of the western pest, the prairie dog, has been devised. A bulletin issued by the Nebraska Agricultural Experiment station tells about it, and gives the fatal prescription. First dissolve three ounces of strychnine and one-half pound of potassium cyanide in one quart of boiling water. Then add two quarts of molasses and one teaspoonful of oil of anise. Stir. Then pour the solution over a bushel of wheat, and while mixing it together sprinkle in four pounds of finely ground cornmeal, which enables the grains of wheat to carry a larger amount of poison. It is a tempting dish for the prairie dog, but one teaspoonful at a hole ends the career of a whole family, and the proportion given above will destroy a town of 500 acres, the number of families to the acre ranging from 90 to 150. The bulletin adds that this year the poisoning is being done over a large range of territory, and with gratifying results.



Cheese Making in Manitoba

By D. W. Shunk, St. Annes des Chenes, Man.

I may begin by calling attention to the fact that good and bad cheese is being made in this province continually. I will, therefore, endeavor to point out some of the reasons why we have bad cheese and suggest a few remedies which, if honestly applied, will in a very short time stop the making of poor cheese and place our product in the front rank among the best.

SOME FAULTS.

Now it is well known that milk is influenced by cold, heat, thunder-storms and flies; even the variation of its richness in butter fat will affect it for cheese making. These influences are largely uncontrollable, but we can vary our processes of manufacturing to meet them. Then we have to contend with weeds, bad water, dirty milking and filthy cans. The last is the production of careless patrons, those without any conscience, and who don't care a snap how much they lower the standard of the product, as long as they can pass their vile stuff on to the cheesemaker and get it out of their sight. There is no way yet known whereby milk thus tainted can be converted into really good cheese, for dirt in milk will make dirt in cheese, and although not visible there as dirt, it is nevertheless there and will surely spoil it.

There are some makers who, through carelessness or ignorance, will accept any kind of milk that is offered, and as a result their cheese is of the hit and miss variety. Others would like to do better and accept an occasional can of poor milk, protesting mildly, and at the same time pointing out the necessity of supplying good milk, in the hope of gradually working them up to be model patrons. When they find that their suggestions go unheeded, more drastic measures are taken, and finally they refuse to accept the milk. This is a critical point, as such a patron will generally coax the makers to take it, as his little bit won't make much difference among all the rest. If the maker still refuses, the patron will get on his dignity, go to the proprietor and threaten to withdraw his patronage from the factory if his milk is not accepted. The proprietor will, in too many cases, tell his naker to take it and do the best he can with it.

Once it is taken the dirty patron has won the battle, and dirt is king. The maker thus treated loses all confidence in his employer. He does not care how things go and has an excuse for doing a little rough and ready work in the factory. There are lots of ways he can save himself over-exertion at the expense of the quality of the product, such as careless measuring of the coloring, rennet and salt, stirring the fresh cut curd too slowly or too violently, developing too much acid in the whey, insufficient stirring of the curd, irregular temperature, bad salting, and putting the curd to press too cold or in any shape to get rid of it quickly and easily. When the cheese are finally landed in the curing room they are a motley looking lot, some high, some low, some with shanty roofs, bandages torn, and some cracked, making excellent subjects for flies and skippers. These careless makers then let the cheese remain on one end without turning till they stick fast to the shelf, and then flop them over any way, no matter if they do touch each other. Next these makers or proprietors try to sell this stuff, at the age of 15 days, for cheese, knowing they are only curd, which could not be digested by a goat. This is the kind of treatment that will always make bad cheese.

RECEIVING THE MILK.

If a maker is really desirous of making a strictly first class article he must ex-

ercise the greatest care in receiving the milk and not accepting a single canful without first thoroughly examining it, so as to satisfy himself that it is clean and untainted. He must keep a sharp eye on the cans and covers to see that there is no accumulation of foreign matter in the seams or the vent tube of the cover, for if there is the milk, although apparently good, will be affected.

RENNET AND COLORING.

All changes of the weather must be carefully watched, and the mode of procedure changed to suit them. When all the milk has been received (which should not be later than 9 a.m.), it should be tested at once to ascertain the degree of acidity. If not sufficiently ripe, it should be left until ripened to a degree that experience has shown to be advantageous. Be very careful about the addition of the total amount of milk in each vat, so as not to get too much or too little coloring in the milk from day to day. Set the milk at a temperature from 85 to 90 degrees, according to the season and the percentage of butter fat contained. The coloring and rennet should be very carefully and evenly stirred in the milk and the vat immediately covered. No jarring or pounding on the floor should be allowed while coagulation is taking place, as that will break and derange the solidity of the mass.

CUTTING, STIRRING & COOKING.

When the curd is ready the cutting should be done with great care, and as evenly as possible, so as to not break or tear the mass, because even cooking depends on even cutting. After being cut it requires very careful hand stirring for about 15 minutes; this allows the whey to separate from the curd, which becomes covered with a tender skin and is somewhat contracted. At this stage heat may be applied, and the stirring done with a rake, the temperature being gradually raised to about 100 degrees. This should occupy about 45 minutes, the stirring being continued somewhat longer, according to the condition of the curd.

DRAWING OFF THE WHEY.

Watch closely for the first sign of acid, which I like to see in about 45 minutes after the heating is done. When there is from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch of acid developed, the whey should be run off and the curd thoroughly stirred three or four times. It should be left evenly piled on each side of the vat and allowed to mat.

HANDLING THE CURD.

When the curd is firmly matted it should be cut in even pieces about six inches wide and turned upside down and left for about 15 minutes. It may then be piled two, three or four deep. It is impossible to lay down any fixed rule of procedure, but the curd should be turned often enough to prevent any small pools of whey gathering on it. Care should be taken to keep the temperature of the curd at about 90 degrees.

MILLING AND SALTING.

When the curd will tear into long elastic strings and show butter after being rubbed in the hand, it should be milled and salted. The salt should be fine and free from lumps, and I like to see it applied in three lots, the curd being thoroughly stirred each time and twice after. It should then be ditched and allowed to drain.

HOOPING.

As soon as the whey quits dripping from the curd it should be well broken over and put to press. I like to see it go to press at 85 degrees, and as quickly as possible, being evenly measured into the hoops with a large pail. When the hoops are all filled, enough pressure should be applied to start the whey only, and gently increased every few minutes, until the curd is fit to bandage.

BANDAGING.

The bandage should be evenly drawn up all round and an inch turned neatly over the end. The cheese should be now well washed with warm water, a cap cloth put on, and put back to press, with heavy pressure applied, which should be contin-

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And Removal



THE business formerly conducted by THE CANADIAN DAIRY SUPPLY CO. at 236 King Street, Winnipeg, was taken over by the DE LAVAL SEPARATOR COMPANY, January 1st, 1901.

The interests of the

DE LAVAL SEPARATOR

in Manitoba, N.W.T and B.C. in future will be looked after by us with offices and stores at Winnipeg, Man. About January 21st we shall move into commodious quarters at

248 McDermot Avenue

(formerly occupied by J. Y. Griffin & Co.) directly west of P.O., one block from Main St. We respectfully invite your correspondence and will cheerfully mail catalogue upon application. To all who may visit Winnipeg we extend a cordial invitation to call on us.

Do not buy a Separator until you have tried an "Alpha" De Laval, and bear in mind that we are always willing to prove or demonstrate the superiority of same over any other.

Over 250,000 in use.

We are closing up the affairs of the Canadian Dairy Supply Co. for them and all correspondence relating to same should be addressed to us.

THE DE LAVAL SEPARATOR COMPANY

248 McDermot Ave., Winnipeg, Man.

Canadian Works:
Montreal, Que.

General Offices:
74 Cortland St., New York.

PHILADELPHIA.

CHICAGO.

SAN FRANCISCO.

used until next day. They should then be taken out and put in the curing room. Carefully examine each cheese. Any that may have the bandage torn or badly put on, or that are not well and evenly pressed, should be rebanded and returned to press.

CURING.

During the process of curing the cheese should be turned every day, and arranged on the shelves so as not to touch each other. The temperature of the curing room should be kept as even as possible. Remember this, factory-owners, if the temperature in your curing room rises high enough to cause the butter fat to leak from the cheese, the quality is endangered to a greater or less extent, according to the duration of such exposure. I consider that well-made cheese intended for export should be kept in the curing room about 30 days, then immediately boxed and put in cold storage.

BOXING.

Cheese should be put in good fitting boxes, the sides of the box being cut down about half an inch lower than the

cheese. The weight should be plainly stamped on the box near the seam and marks that are to be put on the box should be put on every box alike.

I have only touched on some of the most important points, and volumes could be said, but I will conclude by pointing out the necessity of all factory managers becoming as well posted in the business as possible, then they will know if the makers are doing their duty. They will also know enough not to expect a mal to accept milk at all hours of the day, all kinds of condition and make good cheese. All factories should have uniform rules governing their operations and they should be lived up to. This will prevent the few careless, dirty patrons, cheesemakers, from doing injury to those who are honest, clean and progressive. When cheese making is conducted in the method I have outlined, we will not have to accept ten, or ten and a half cents per pound, while it sells in Ontario for 15 cents, to be shipped past our doors.

Lemon Jickling, Morden, Man., Jan., 22 1901: "Your book, 'Things Worth Knowing,' just to hand. I must say it is a very handy book of reference."

Eastern Ontario Dairymen.

At its recent meeting held at Smith's Falls, Ont., the Butter and Cheese Association of Eastern Ontario had a very large gathering, evidencing increasing interest in the operations of the association. The opening was graced by the presence of the Governor-General and Lady Minto. His Excellency spoke of the great expansion of the dairy industry of Canada. In 1890 the exports of cheese were \$9,372,212, while last year they had reached \$19,836,324. In 1890 the butter exports were valued at \$340,131, while in 1899 they had risen to \$5,122,156.

President Derbyshire said that the future success of the business would depend entirely on their keeping up to a high standard of excellence. Fully one-third of those engaged in dairying are not making money. They have no facilities for making the best goods, and some of them don't seem to care. They must turn over a new leaf. They had last year the highest prices on record, yet there were many things to be got rid of before they could claim for their product the highest style of excellence. They should have made more butter. We have 60 per cent. of the cheese trade of the old country and only 7 per cent. of the butter, which is nothing like a fair proportion. Home production is increasing and will help to equalize prices. No cheese should be made in November. He complimented the two Ministers of Agriculture, Messrs. Fisher and Dryden, on the good work done by their departments.

LOW PRICES FOR NEXT SEASON.

Arthur Hodgson, president of the Montreal Butter and Cheese Association, said the exporters and makers should come together more frequently. The cause of the high price of cheese last year was because no fall cheese was left over from 1899. The factories closed up at the end of October in 1899 and everybody in England was consequently hungry for cheese last May. Last fall 50,000 to 80,000 cheese were made in November, and if this is followed by a big make in April, low prices will rule this year. There should, therefore, be no making in April.

Prof. Dean, of the Ontario Agricultural College, gave two addresses. He said that the hand separator enabled the dairyman to take more cream out of his milk, and, either for home dairy work or cream gathering, it was a great benefit, but there were difficulties in its use. The majority of farmers are not careful enough to keep the separator clean. The cream is too seldom collected and new cream is dumped in among the old. This had had a very bad effect in Australia, and would have in Canada also. His address on "The Evolution of Dairying" dealt with a good many points of interest in the east, but more remote from what we have to deal with here in the west.

THE CENTURY'S PROGRESS.

C. C. James, Deputy Minister of Agriculture, spoke of the wonderful expansion of this country within the last century. Fifty to 100 years ago farmers were busy making homes out of the wilderness with incomes derived largely from timber, ashes, grain and furs, 25 years later there was a step upward, when settlers came in, bringing cows and horses. There was a more marked step upwards 25 years later, when co-operative cheese and butter making was introduced. Dairying has made more progress than any other industry. Fruit-growing followed later, and to-day the farmer has a bright future before him in the development of butter making, the bacon trade, poultry, fruit and pure bred stock. The people were now assisted by the Government as never before, which aided by giving information, helping conventions, farmers' institutes, publishing reports, bulletins, etc. People must place themselves in proper relation to all these helps.

But they would not do to depend too much on that class of help. The best of our prosperity would always depend on our own push and a careful study of the

problems we have to deal with. Many think agriculture the hardest of all work, but this is a mistake, and the more skill we acquire the easier will all our work become and the more profit will we get out of it. If the attractiveness of agriculture is pointed out and kept to the front, more boys will be willing to remain on the farm. There are new features opening up every day which make it attractive. The future of Canada does not depend on her mines, her fisheries or her forests, but on her agriculture. What great possibilities are behind it all. The average milk output per cow in Ontario is 4,000 lbs. If this were increased to 7,000 lbs., the average of the herd at the Agricultural College, it would increase the value of milk products in Ontario by \$12,000,000. Girls and boys should be properly trained and fitted for this great work of development.

FAULTS IN CHEESE AND CHEESEMAKING.

On this subject some pretty severe things were said by men who certainly ought to know what they speak of. Messrs. G. G. Publow, chief instructor, and J. A. Ruddick spoke from their standpoint as experts. Jas. Alexander and Arthur Hodgson, of Montreal, as buyers, not only denounced the skill of some of the makers, but charged them with downright rascality of a kind that is sure to seriously damage our reputation on the English markets. Mr. Publow went over the old ground about using only healthy cows, clean milk, and cleanliness all through. Makers ripened the milk too much to begin with and shipped the cheese too green. Cheap makers and poor factories help the work of degeneration.

J. A. Ruddick had a very hearty reception, and spoke on a good many points that must have attention if our credit is to be maintained. Clean flavor, fine texture, even color and neat make-up are all points that mean money when we want to sell. We should aim to equal the best English and Scotch cheese in quality. He found many undesirable flavors in last summer's make of cheese. Acidic cheese were quite numerous last September and October, due to warmer weather than usual, and the milk being too mature before setting. Pasty cheese is due to too much moisture. Flavor can be traced largely to the milk. Makers should reject all bad milk. Patrons lose more by bad milk than by tampering with milk. This will not be remedied until the maker is relieved from responsibility for tainted cheese. He is made the innocent scapegoat. Many patrons do send good milk and should be protected from those who do not. There have been serious complaints about the boxing. Very often 50 per cent. of the boxes are broken, and fully 10 per cent. are broken on all cheese. Boxes should be heavier and closer fitting. Damp boxes are too numerous in the fall, due to being used when new. All boxes should be thoroughly dry before cheese are put in.

"Canadian cheese," said Jas. Alexander, one of Montreal's leading exporters, "has gone back in reputation fully five years owing to the poor way in which it has been sent out. Some factorymen are so sharp they cut themselves by trying to send out whey for cheese. Poor cheese can always be detected in the freight sheds at Montreal."

Mr. Alexander would like to see laws passed compelling factories to use the milk of three or four hundred cows, to have proper equipment, and a competent maker. Cheese should not be made in November.

Arthur Hodgson, another well-known buyer, backed up all that had been said by Mr. Alexander. Factories which sell November cheese are sure to suffer the next season. Exporters never lost as much by inferior cheese as they did last year. He had seen it in some warehouses perfect in flavor but lacking body.

Mr. Hodgson said driving too hard a bargain with the cheesemaker is poor economy. Some of the naughty tricks practiced by cheesemakers include putting a chunk of white curd in the centre of a colored cheese. Sometimes

from the same factory he gets cheese varying from 60 to 90 pounds in weight. It is hard to convince English buyers that these cheese came from the same factory.

These four practical men did the right thing in telling the ugly truth about the degeneration of Canadian cheese, and making it plain that trickery is a poor substitute for honest and skilful work. A good character is only good when it is properly taken care of.

Territorial Creameries.

J. W. Mitchell, Superintendent of Creameries for Assiniboia and Saskatchewan, reports a very satisfactory increase in the output of the factories under his supervision. The figures are as follows:—

Creamery.	Output of Butter (lbs.).	
	1899.	1900.
Churchbridge	31,674	65,325
Grenfell	39,154	49,817
Moose Jaw	34,815	32,285
Moosomin	8,461	24,296
Prince Albert	13,758	18,892
Qu'Appelle	16,581	24,647
Regina	23,051	24,645
Saltcoats	13,190	18,650
Saskatoon	9,197	10,393
Whitewood	42,284	37,038
Yorkton	17,491	27,329
Total	249,736	333,221
Increase	83,485	pounds

A dairy school has been established in connection with the agricultural college at Brookings, in South Dakota. A full attendance is reported for the opening session the first of the year.

The annual meeting of the South Qu'Appelle Creamery Association was held on January 12th, when officers were elected for the coming year, Mr. Handyside, president. Mr. Mitchell, superintendent of Northwestern creameries, was present and gave an address.

The number of animals admitted to the Advanced Registry of the Holstein-Friesian Association for November and December, 1900, is 26. The best record was 21 lbs. 8.2 oz. of butter, 85.7 per cent. fat to the pound, in a seven-day test.

The shareholders of the Rapid City creamery have decided to carry on the concern, and will form a joint stock company for that purpose. A committee has been appointed to deal with the matter, and Messrs. Fanning and Jackson, of the Newdale creamery, will be called in for consultation.

Messrs. S. Larcombe, H. Randall, H. A. Manwaring, J. Wally, C. J. Mickle, A. Doig and W. Patterson were elected creamery directors at the annual meeting of the patrons of the Birtle creamery. We understand that tenders are being asked for to either rent or purchase the plant for the coming season.

The officers of the Cheese and Butter Makers' Union are preparing an elaborate programme for their convention, which is to be held in Maw's hall, Winnipeg, Feb. 20, 21 and 22, the same week that the live stock and Manitoba Dairy Association hold their conventions. Cheese making will be discussed by Messrs. Stuart Macdonald, Ross and Cluff. J. W. Mitchell, supt. of creameries, Regina, Assa., will speak on the Babcock Test. Prof. Robertson, J. A. Ruddick, Hon. R. P. Roblin, C. C. Castle and others are expected to speak. Considerable time will be devoted to the French-speaking population.

It is said that Montreal requires 550 sixty-pound packages of butter to meet its daily needs, while Toronto requires nearly the same amount. Other cities and towns make proportionate demands on the butter products of the country. While the year's butter export shows a decided falling off for the year, it is perhaps not to be wondered at. Despite all efforts of the American Government to develop an export trade in butter, it has not grown very fast, largely because the demand for butter within its own territory is such that better prices can be obtained at home. Gradually similar conditions will prevail here in Canada.

The Chinese seem to have a more tender regard for cows than for "foreign devils." They would not even have them milked. According to the Foochow Herald, a notice has been posted up to the following effect: "You are not allowed to drink cow's milk. Man has no right to take from animals their nourishment, particularly the cow, which is the most useful of all. Those who sell milk pollute their conscience for the sake of money, and those who drink it with the idea that their bodies benefit by it are not less blameable. Under the pretext that their children feed themselves with milk, they wish to do the same. But animals have the same needs. Who will feed the calves if men take all the milk from the cows?"

The Foxwarren creamery reports a very favorable season last year. It opened up, with Mr. Gadd in charge, on May 7th, and closed on October 24th. The total make amounted to 33,400 lbs., all of which was sold direct in B. C. markets and was shipped each week as manufactured. The average price paid the patrons for cream was 14c. per lb. for the season. The cost of making was 5c. per lb., which included replacing of broken and worn out machinery, insurance, etc. Ice and wood are now being put up ready for next season's operations, which promise much larger than ever heretofore. New routes are arranged for both south and east; one will be put in as far south as Beaver Rapids, and one completely covering the Sols-girth district. It is expected Mr. Gadd will have charge of the creamery same as last season.

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'FAVORITE' CHURN



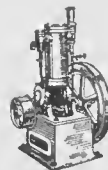
Sold by all leading dealers.
IMPROVED FOR 1901.

No.	Holds.	Churns.
0	6 gals.	1 to 3 gals.
1	10 gals.	1 to 5 gals.
2	15 gals.	2 to 7 gals.
3	20 gals.	3 to 9 gals.
4	26 gals.	4 to 12 gals.
5	30 gals.	6 to 14 gals.
6	40 gals.	8 to 20 gals.

PATENT FOOT AND LEVER DRIVE.
PATENTED STEEL ROLLER BEARINGS.
IMPROVED STEEL FRAME.

Superior in Workmanship & Finish.

DAVID MAXWELL & SONS,
St. Mary's, Ontario, Can.



Gasoline Engines.

Cheaper than steam. Always ready for work. Require no attendance after starting.

Cream
Separators.

Intending purchasers are requested to send for my 116 page catalogue before placing their orders.

I represent largest and best manufacturers of Dairy Goods, and can supply at low prices anything required in the farm-dairy or factory.

Shipments of Fresh Dairy Butter wanted.

Correspondence solicited. Address:

Wm. Scott, 206 Pacific Ave.,
Winnipeg.



The Number of Laying Hens that May Be Profitably Kept in One Pen.

It is a matter of importance to determine how many laying hens may be profitably kept in a poultry house. It is especially important in those regions where the climate is such that carefully constructed buildings are required for the proper housing of fowls in winter, says a U. S. Experiment Station bulletin. The opinion is quite generally held that when kept in yards or allowed to roam at will hens do best in flocks of about 40 or 50, and that when confined in winter quarters each laying hen requires about ten square feet of floor space. The size of the flock which may be profitably kept in a pen of definite size has been recently reported upon by the Maine Station.

The station poultry building contained 15 pens alike in size and arrangement of window space, and gravel, bone and water dishes. Pens were 10x16 ft., and the entire floor space of 160 square feet was available, since the walk used by the attendants was elevated above the floor. The tests were made by 4 lots of 15 pullets each, 4 lots of 20, 4 lots of 25, and 3 lots of 30. The breeds selected were Brahmas and Barred Plymouth Rocks, there being 8 lots of the former and 7 of the latter. With each breed the lots contained from 15 to 30 individuals. The experimental conditions would give the lots containing 20 pullets 8 square feet each, those containing 25 pullets 6.4 square feet each, and those containing 30 pullets 3.5 square feet. Care was taken to have the individuals in the lots as uniform as possible in form, size and vigor. All the pullets were hatched early in May, with the exception of one lot of 15, which was hatched about two weeks earlier. The test began in November and continued six months. Careful records of the egg production, etc., were kept. The results with the different lots of the same size were found to be quite uniform.

The table shows that "the lots containing 20 hens gave a greater total net profit per lot than did those containing any greater or less number of hens. Lots with 25 hens gave slightly greater net returns than did the 15 hen lots. The lot that had 30 hens each gave very much less net returns than did any of the others." The average net profit per hen, however, steadily decreased as the number of hens per pen increased, being 80 cents per hen during six months with the lots of 15 and only 30 cents with the lots of 30.

The tests indicate in general that the best results will be obtained by allowing each hen from 8 to 10 feet of floor space.

A Cure for Egg-Eating.

Hens, when kept in confined areas, are likely to contract quite a number of troublesome habits—among others the annoying trick of eating their own eggs, and the nasty habit of pulling one another's feathers. As a preventative of egg-eating, many cures have been recommended from time to time. A most effective cure is that of filling a number of egg-shells with a mixture of soft soap and carbolic acid, and placing these in the nest most frequented by the offending birds. After dosing themselves with two or three eggs so treated, the birds will subsequently be found very chary of attacking even natural eggs.

The Winnipeg poultry men expect to send two carloads of poultry to the Manitoba Poultry Show at Brandon, January 29 to February 1.

The Scratching Pen.

At no time of the year is the scratching pen of so much value as it is now, when the fowls can not get out for exercise. By providing one of these places the fowls are given a chance to scratch and work under shelter, which is equivalent to foraging. Any breed—even the Light Brahmas—will forage if made to do so. Of course, as stated, there is no such thing as foraging in winter, but he who comes the nearest to furnishing summer conditions will more surely succeed. A good range can be made in winter by providing a scratching place for the fowls and giving some incentive to induce scratching. It is not the thing to do to throw a little litter on the floor and call that a scratching pen. The floor should be covered to a depth of several inches, and then scatter a gill of millet seed over the litter and turn the fowls loose. They will do the rest, and it will give you a restful feeling to see the way they will improve the time. The up-to-date poultry house is incomplete if it does not have a scratching place. The main point is to keep the hens at work. They will be better and will do better.

Specials at the Manitoba Poultry Show.

Besides the regular prize list the Manitoba Poultry Association has sent out a list of special prizes. Lieut.-Governor McMillan offers a grand challenge cup valued at \$100 and a \$10 gold medal for the best breeding pen, barring the Asiatic, American and Bantam classes. The cup to be held one year by the winner. The gold medal becomes the property of the winner. The Patterson cup, given by the last Lieut.-Governor, and a \$10 gold medal are offered for the best breeding pen in the American and Asiatic classes. The E. L. Drewry grand challenge cup, value \$100, and a \$10 gold medal go for the best three males and three females, any variety.

The Nor'-West Farmer offers a grand challenge cup and medal for the highest scoring pen of birds exhibited by a *bona fide* farmer residing in Manitoba or the N. W. T. The Winnipeg Poultry Association offer a \$10 cup for the best breeding pen of solid colored, and the Virden Poultry Association another for the best parti colored, fowls bred in Manitoba or the N. W. T., bantams barred. The Brandon Poultry Association offer a silver cup for the best pair of turkeys, any variety, and B. Schrage gives a silver cup for the best collection of bantams. Besides these cups and medals, some 36 special prizes are offered by various parties. The prize list is a good one, and a successful show and annual meeting is expected.

The annual meeting of the Manitoba Poultry Association will take place at Brandon, in the council chamber, on Thursday, January 31st.

Light in the poultry house is an absolute necessity, and the inmates must have it to be in a healthy and cheerful condition, for fowls will not thrive in a dark and cheerless place any more than plants will. There you have it! A busy fowl is a happy one and a hen thus kept will be a singing and laying one also.

Where fowls are kept in confinement, whether the season be summer or winter, they must be furnished green feed, in the form of cabbage, turnips, beets or cut clover. These should not be thrown loosely into the pen to become quickly soiled, but put into a rack with sloping sides. The hens reach through the slats and eat what they desire. The top slopes so that they cannot roost upon it. If filled with cabbage, etc., they will come down to the hens as fast as eaten. Split carrots in halves, and allow the hens to pick at them at will. Have the feed troughs sufficiently large so that all the fowls can find room. Beef blood mixed with ground grain is excellent for both young and old stock. Refuse crackers and stale bread make an excellent addition to the morning mash.



As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on legal matters. Enquiries must in all cases be accompanied by the name and address of the subscriber but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and facts stated clearly but briefly set forth.

Answers to Questions.

Strayed Animals.

A. J. H., Rapid River, Ont.: "What can I do with a stray heifer that has been at my place over six months. I have notified the owner several times to take her away, but he pays no heed, just lets her stay on, and it is now the middle of January, and the beast is actually starving. Please let me know what proceedings to take in this unorganized district of Rainy River, Ont."

Answer.—After notification, better sell by public auction to cover outlays. Proper care of the animal should be taken in the meantime and not allowed to starve.

Fences.

Subscriber, Swan River, Man.: "Last season my neighbor's cattle destroyed some of my crop. It was not fenced. We have no municipality. 1. Have crops got to be fenced? 2. Can stock run at large, or have they to be fenced or herded? 3. What steps can be taken to secure damages?"

Answer.—1. No. 2. The owner is responsible for damages done by his own stock. 3. By suit.

Taxation of Homestead.

Subscriber, Miami, Man.: "I bought a quarter section of land from the government, subject to homestead duties, in 1898. The municipality is pressing for taxes on the same. Am I liable till I receive patent?"

Answer.—Yes.

Pound and Herd Laws.

A. H. S., Yellow Grass, Assa.: "1. Is there any difference between a herd law district and a pound law district? 2. A person buys a quarter section of land for pasture, he occupying the same. Can other people's cattle be herded on it against the will of the owner? 3. Can the cattle of the owner of this land be legally taken to pound, that are quietly feeding on it without a herder?"

Answer.—1. No. 2. No. 3. No.

Farm Fixtures.

Subscriber, Plumas, Man.: "A sold his farm and buildings to B. Would it be right and just for A to remove the pump from the well, nothing being said about the pump in sale?"

Answer.—No.

Yearly Wages.

G. D., Beulah, Man.: "Can a hired man working on a farm by the year claim wages for May 24th, July 1st and Thanksgiving Day, provided he does no work on those days?"

Answer.—He is entitled to be paid for the whole year.

Farm Lease.

Greenhorn: "A leases a piece of land from B and pays him a cash rent for the land. A sows wheat on the land and threshes it on the premises, but when he wants to use the straw as fodder on his own place (the adjoining farm), B objects and says he will not let A have any straw, as he needs it himself. There was no written lease and no verbal agreement about the straw. Can A remove the straw or any portion of it, or does it all belong to B?"

Answer.—"A" is entitled to everything of such a nature off the land.

Railway Taxation.

Subscriber Deloraine, Man.: "Can you tell me whether the C.P.R. have paid any taxes on their lands between Winnipeg and Deloraine up to the present time, or when will they commence to pay taxes?"

Answer.—1. Can only be ascertained by investigation of the books of the various municipalities through the company.

2. Company's lands only liable to taxation from the date of its contract with the Crown until 20 years after issue of the patent, unless land sooner sold or occupied.

I will sell my prize-winning Silver Laced Wyandottes. They won 4 firsts, 3 seconds, and 1 third within the year, competing against the best birds in the country. Will also sell all my White Rocks a few Minorca females and a large number of Barred Plymouth Rocks. A few show birds of each kind for sale. These birds are all bred from the best blood that money could buy. My reason for selling is that I will breed Barred Plymouth Rocks in the future. Eggs \$2 per 13. A. J. CARTER, Box 90, Brandon, Man.

OAK GROVE POULTRY YARDS

LOUISE BRIDGE P.O.
WINNIPEG, MAN.

I have 25 pair of

White Chinese Geese FOR SALE.

From \$5 to \$10 per pair. They are the Leghorn Goose, my old imported goose having laid over 100 eggs this season. Also a few pair of Toulouse, Brown Chinese and Embden Geese, and Mid-winter's noted strain of half-wild Bronze Turkeys, few pair left; Barred Rocks, Javas, Brahmas, S. L. Wyandottes, Houdans, Minorcas, R. C. Brown Leghorns, B. B. R. and S. D. Bantams.

See my exhibit at Brandon Poultry Exhibition in January, 1901. Write for circular. I am sole agent for Manitoba and N. W. T. for Geo. Ertel & Co.'s Victor Incubators and Brooders, Mann's Bone Cutters, Green-cut Bone and other poultry supplies. Address—

CHAS. MIDWINTER, LOUISE BRIDGE P.O., WINNIPEG

As I am going to breed Plymouth Rocks, I wish to dispose of all of my prize-winning LIGHT BRAHMAS, LANGSHANS and PARTRIDGE COCHINS. I will sell reasonable or trade for B. P. Rocks. My stock is first-class and must have the same in exchange. My birds are prize-winners and too well known to need any comment.



In the future I intend breeding B. P. Rocks, African Bantams and Seabright Bantams. I have now a litter of pedigreed COLLIE and FOX TERRIER PUPS for sale.

H. A. CHADWICK,
St. James P. O., Man.

LOUISE BRIDGE POULTRY YARDS

Are still Headquarters for the leading strains of Single and Rose-Comb White Leghorns, White and Black Wyandottes, Black Spanish, B. P. Rocks and Blue Andalusians. You will have to hurry up with your orders if you want a choice Barred Rock or Leghorn cockerel. They are going fast, only a few more choice ones to spare.

Address—GEORGE WOOD,
Louise Bridge P.O., Winnipeg, Man

MAW'S POULTRY FARM, Winnipeg

Acclimatized Utility Breeds. Bronze Turkeys, Toulouse Geese, Rouen Ducks, Deep-keeled Pekin Ducks, P. Rocks, Wyandottes, Leghorns. North-west Agent for CYPHERS' INCUBATORS. They are guaranteed to hatch chickens that die in the shell in ordinary machines; self-acting, supply their own moisture. Chicks hatched are healthy, and grow quickly to maturity. Poultry and Incubator Catalogues mailed free. A grand lot of P. ROCK Cockerels ready to ship.

SHOEMAKER'S POULTRY BOOK

And Almanac for 1901, two colors, 160 pages over 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. How to raise Chickens, successfully, their care, diseases and remedies. Diagrams with full description of Poultry houses. All about Incubators, Brooders and thoroughbred fowls, with lowest prices. Price only 15 cents. C. C. SHOEMAKER, Box 186, FREEPORT, ILL.

DES MOINES INCUBATOR, The BEST and the CHEAPEST.

Illustrated Catalogue, 5c. per mail. Poultry's Guide, new edition, 15c. per mail.

O. Rolland, 373 St. Paul St. Montreal. Sole agent for Canada.

POULTRY SUPPLIES Green Cut Bone at \$2 per 100 lbs. to Farmers. Will make your hens lay Fresh Eggs, worth from 30 to 40c. per dozen. Send them in to me and I will get you fancy prices. R. DOLBEAR, 1238 MAIN ST., WINNIPEG

G. H. GRUNDY VIRDEN MAN.

Breeder of high-class Box 688 BARRED ROCKS, S. L. WYANDOTTES, B. R. GAME BANTAMS.

20 YEARLING BREEDERS AT \$2 EACH. Satisfaction guaranteed or money back.

THE PROFITABLE HEN

is the one that will lay both winter and summer. Green Cut Bone will make her do it. It has been found by actual experience to double the eggs in every instance where used. The

ADAM GREEN BONE CUTTER cuts bone in the most satisfactory way. Leaves the bone in fine shavings easily consumed by chicks or mature fowls. Can't be choked by bone, meat or gristle. Cleans itself. Turns easiest because it is the only cutter made with ball bearings. Several sizes for man and bird. Catalogue No. free. W. J. Adam, Joliet, Ill.



Winnipeg, Jan. 25, 1901.

All lines of business are characterized by one word—stagnation. Values in all lines have changed but little. Wholesale houses generally are stock-taking, though a few houses have their travellers out looking for spring orders. Retail merchants complain that business is very quiet. This is always the case soon after the holidays and will right itself in time. Preparations are being made for an expansion of business in several lines during the coming season. Every indication points to Winnipeg becoming a very large commercial centre. Bank clearings for the last week are somewhat behind those of the corresponding week of last year.

Wheat.

In spite of fluctuations from day to day, the market value of wheat differs very little from where it has stood for months. The spurt at the beginning of the year was largely speculative and the market, though giving no evidence of weakening, shows a very slight tendency to rise. A month ago contract wheat at Chicago was worth fully 70c. spot cash. From 79c., its high water mark, it had got down to 75c., and May to 78c. This morning it stands at 72½c. to 72¾c. for February, and 74½c. for May. On the home market there is next to nothing doing. About 5½c. for No 1 hard and 77½c. for 2 hard at Fort William is quoted. At the Ogilvie mill here 64c. for No. 1 hard and 61c. for No. 2 are the going figures.

Winnipeg inspection for the week ending Jan. 21st stood as follows:—1 hard 0; 2 hard, 4; 3 hard, 40; no grade, 114; other grades, 6; total inspection of wheat, 164 cars. Last years inspections for the same week were 285, of which 139 were No. 1 hard.

Oats.

There has been a very lively movement on the local market at Edmonton, and free purchasing at current rates. Elsewhere the deliveries have been very moderate. There will be a fair demand in Manitoba for reliable seed from the west, and choice car lots are worth 41c. at Winnipeg. But there is a good deal of tough stuff offering, and this is barely safe as seed unless very carefully handled, to avoid heating as the weather gets warm. Home oats at Winnipeg are a little livelier and now make 36c. to 37c. Edmonton oats, 38c. to 40c., according to quality.

Barley.

Barley also is rather quicker and worth 38c. to 40c. at Winnipeg; for seed it is worth more.

Speltz.

Enquiry is being made for seeding purposes. It is worth \$1.50 a bushel at Winnipeg.

Flour and Feed.

No change from last quotations, but all kinds of feed are growing scarcer. Ogilvie's Hungarian, \$2.10; Glenora, \$1.95; Manitoba, \$1.60.

Bran and shorts are now \$14 and \$16 sack-ed.

Cattle.

Very little is doing. A few animals are moving, but most of those ready for market are now in the hands of the dealers. Prices are firmer and as high as 4c. has been paid for choice beef, the usual run, however, bring about 3½c., while poorer animals bring as low as 2½c. Buyers are preparing to purchase stockers and are offering the usual prices—\$14 to \$18 for yearlings, and \$18 to \$22 for two-year-olds.

Fresh milch cows are lower than at this time other years. While \$30 to \$45 is the nominal figure, it takes extra good cows to bring those figures.

Dressed Beef.—Butcher's killed, 5c. to 6c., delivered in Winnipeg, and country dressed, 4½c. to 5½c.

Sheep.

Butchers are well supplied with frozen mutton and so nothing is moving in the live line.

Hogs.

Owing to higher prices in the east values have advanced here, choice hogs being worth

5½c. delivered in Winnipeg, lower grades, 4½c. to 5c.

Dressed hogs are coming in freely and bring 6c. to 6½c. for choice carcasses, while stags and sows bring lower prices.

Butter and Cheese.

Dairy Butter.—The receipts at Winnipeg are fairly liberal, but very little of that coming in is first class. Choice lots command good prices, as they are scarce. Choice tubs and rolls bring from 16c. to 18c. on a commission basis, and lower grades 14c. to 16c. Cheese.—Market quiet, as there is no cheese moving. What there is for sale is in the hands of commission men.

Poultry and Eggs.

Poultry.—The demand continues good and there is quite a demand for home grown stock. Turkeys are worth 11c., geese 9½c., ducks and chickens, 8½c. These prices are for fowls delivered in Winnipeg.

Eggs.—Market is bare of fresh eggs. Could they be obtained they would bring 25c. per dozen by the case.

Hides.

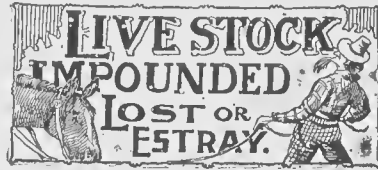
City dealers are paying 4½c. to 5½c. for frozen hides, less a tare of 5 lbs.

We call the attention of our readers to the advertisement in another column, of the Rippley Hardware Company, Grafton, Illinois, who have recently established a Canadian branch factory at London, Ont., which is in charge of J. S. Pearce, and are now manufacturing at that point their line of feed cookers, which have had such a large sale in the States. We gladly welcome this addition to our industries; and knowing well the sterling qualities of their manufacture, do not hesitate to recommend them to our readers. The particular pattern of cooker advertised in this issue, is one for which they are justly famous. It is built like a steam boiler, and for this reason it is particularly strong and durable. The materials used in making are all of the best; and it can be used not only to cook feed, but to heat water and buildings at some considerable distance. The modern farmer who is making the most of his opportunities requires something of this sort, and we suggest that our readers write the Rippley Hardware Company for catalogue and prices, which will be mailed immediately. Just at this season these goods are in great demand. We can—and very gladly do—recommend these people to our readers as worthy of confidence, and hope that many of those who see this notice and the advertisement will write them. Do not forget to mention this paper.

John S. Troughton, Marney, Man., Jan. 16, 1901:—"Allow me to express my appreciation of The Nor-West Farmer in all its departments. While not professing to be a religious paper, yet its tone is decidedly healthful and ought to be in every farmer's home in the west. Its tone is pure, its hints are profitable, and its topics opened for discussion are instructive. I myself have profited in several ways and take this opportunity of expressing my appreciation of your paper."

Plea from an Edmonton Bachelor.

No doubt Horace Greely, with his "Go west, young man," has been responsible for many protracted bachelorhoods and much resultant dyspepsia among the young men who in years gone by followed the setting sun and "went west," but letters of such a pathetic nature as the following, taken from an Ontario exchange, are getting just a shade out of date. The plea is said to come from a bachelor at Edmonton, Alta. Here it is: "Heving red yur papir fer sum time i hav cum to the konklusion that it is a good meedum to reech the publick by an frum redin you persnls i infur that ther ar sum wemin thereabouts. i feel that this is my opportunity an' that man proposes an' God disposes. Sum fifteen yeers sinc i left my boyhood hom to find a fortun in this country an' wile i hav found a fortun i now reeliz that i hav mised the ministring kar of a woman an' her simthy. i have a fortun an a ranch jest outsid Edmontom. no margag on it, i rased this yere 8,000 bushels of whete of 207 ackers an rased a blant sigte more an wood feel beter if i had a wife to doo the cookin. i am feedin' a holl slew of hog what i can sel soon if i get maryed. if you kan find me a wooman i will make it intrestin fer yu. i am gettin a little bald an i want her to take me as i am. i kant writ mutch butt am a blante sigte snarter than they think. print this fer me if yu think it will du any good, but i don't want any yung gurls to aply; just the meedums." Surely such a worthy cause calls for volunteers.



In this department we publish as full a list of the impounded, lost and estray stock of Western Canada as is available. Notice in one issue, not exceeding five lines of lost or estray stock is given free to any of our subscribers who forward information. Notices exceeding above mentioned length will be chargeable at the rate of 10 cents per line on all overplus matter. The list of impounded stock is compiled from reliable sources.

By LOST stock is meant stock that has been lost and the owner advertises to find them.

By ESTRAY stock is meant stock that has wandered on to a person's place, or into his hand, and are advertised to find the owner.

Write the letters of all brands very plainly. Display notice in black-faced type will be given for \$1 (which must be enclosed with the order), such notice not to exceed 40 words.

The following is a list of live stock impounded, lost and estray since Jan. 5th issue:

Impounded.

Arizona, Man.—One huckskin horse, three white feet, white star in face, anchor brand on left shoulder, about six or seven years old; also one black mare, a few white hairs on right hind leg, branded 158 on right shoulder and two anchors on left shoulder, about six years old.—James Paisley, 14, 10, 12.

Bird's Hill, Man.—One black horse, about nine years old, white face, left hind foot white half way to hock, right hind leg white above the foot, branded with a heart on the right shoulder.—B. Ishister.

Poplar Point, Man.—One brindle heifer, rising two years old, notch on top of right ear, horns cut or broke off, leaving them about two inches long.—John Francis, Lot 85.

St. Norbert, Man.—One red grey horse, hind feet white and one front foot white, forehead white, stamped on left hip, about seven years old.—F. N. St. Germain.

Lost.

Austin, Man.—One red and white heifer, will be three years old in the spring.—James Watters.

Austin, Man.—One black pony mare, four years old, marks of wire cut on hind foot; one red roan colt, two years old. Reward.—W. B. Gilroy.

Baldur, Man.—Mare, five years old, white hind feet, star on forehead, and answered to the name of Lucy. Strayed from Baldur on Jan. 10th.—F. Schultz.

Birtle, Man.—One huckskin horse colt, black stripe down back. When last seen had halter on, with a short piece of rope attached.—O. Burdett.

Carberry, Man.—One light hay mare, three years old, tall, slim, a few grey hairs in forehead, scar on back of hind leg between knee and foot. \$5 reward.—Dan McLean, 21, 11, 15.

Holland, Man.—One red heifer calf.—W. F. Graham.

Killarney, Man.—One mare colt, about 18 months old, white face, two white hind feet. Reward.—Jas. Daly.

Lacombe, Alta.—One red and white cow, branded T on left shoulder, or F.U.O. on left thigh.—S. W. Paisley.

Regina, Assa.—One brown mare, 16 hands high, branded on left shoulder, sore on inside of right fetlock and sore shoulders.—J. T. Symes.

Regina, Assa.—One hay horse, branded JG on shoulder; one hay horse, unbranded, large head, about seven years old; one grey horse, about 12 years old, how-legged in front. All had leather halters on when they went away.—Geo. Beattie.

Tetlock, Assa.—One yearling heifer, red, may have some white, branded indistinct G on left shoulder; also light hay mare, with filly, weight about 1,250, branded O and inverted V, with bar through, on left shoulder and on hoof, white stripe on face, little white on one hind foot; foal has white stripe on face, hind feet and one fore foot white. Reinhold Walter.

Yorkton, Assa.—One red and white yearling steer, head red, with white V on forehead, no brand.—Edward Teper.

Estray.

Binscarth, Man.—One red and white spring heifer calf.—A. Barker.

Colleston, Sask.—One red and white mottled steer, two years old, no visible brands.—Andrew Knox.

Colleston, Sask.—One red and white cow, about four years old, tip broke off left horn, no brand visible.—Peter Byrne.

Fort Qu'Appelle, Assa.—One steer, light roan, with dark neck, in poor condition.—S. Redpath.

Hayward, Assa.—One steer calf, red, white stripe on back; one heifer, rising two years, white, ears and tail cropped, indistinct brand on left side, H in middle.—Robert Douglas.

Headingley, Man.—Lightly built hay mare, three years old, swelling on knee of right front leg. Owner may have same by proving property and paying expenses.—W. Buchanan.

Lehret, Alta.—Eight head of cattle, about two and three years old. Two or three cows in herd. Cattle are branded indistinct brand, looks like A7 on right rump.—A. Larroque, 1, 21, 12.

Prince Albert, Sask.—On red steer, about three years old, no brands visible.—John Alston, the Creek.

Prosperity, Assa.—One two-year-old heifer, spotted red and white, wild.—James McCutcheon.

Pukahn, Sask.—One two-year-old steer, red, no brand visible; one yearling steer, red, no brand.—Geo. Tait.

Shellbrook, Sask.—One light muley heifer, a split in the right ear, four white spots on right flank, one white spot on left flank, white under belly and white on tail, brand on right side, not very plain.—John Groves, Pine Creek.

Willoughby, Sask.—One red steer, two years old, white spot on forehead, white on right flank and belly, no brand visible.—E. Howard.

Yorkton, Assa.—One two-year-old red heifer, small white spot on forehead.—Andrew Kanall.

Yorkton, Assa.—One roan heifer and calf, also red and white yearling steer, brand on right ribs, not plain, something like VIP.—Jas. Williams, Crooked Hill Creek.

—A good deal appears in the daily papers about the danger of the slow-going, conservative business methods of English manufacturers losing their trade to the enterprising Americans and the persistent Germans. The same thing can be said of farm implements in England. A well-known writer says that the conservatism of British manufacturers in keeping to old models, or introducing only slight modifications thereof, and refusing to adopt suggestions for labor-saving made to them, is slowly but surely working their ruin. In his own case, he says, he is obliged to send to the United States for most of his implements and machines because he cannot obtain in Great Britain articles which effect the maximum of labor-saving.

Points of Excellence.**A Few Reasons Which Are Rapidly Making a New Catarrh Cure Famous.**

Stuart's Catarrh Tablets, the new Catarrh cure, has the following advantages over other catarrh remedies:—

First: These tablets contain no cocaine, morphine or any other injurious drug and are as safe and beneficial for children as for adults; this is an important point when it is recalled that many catarrh remedies do contain these very objectionable ingredients.

Next: Being in tablet form, this remedy does not deteriorate with age, or an exposure to the air, as liquid preparations invariably do.

Next: The tablet form not only preserves the medicinal properties, but it is so far more convenient to carry and to use at any time that it is only a question of time when the tablet will entirely supersede liquid medicines as it has already done in the medical department of the United States army.

Next: No secret is made of the composition of Stuart's Catarrh Tablets; they contain the active principle of Eucalyptus bark, red gum, blood root and Hydrastin, all harmless antiseptics, which, however, are death to catarrhal germs wherever found, because they eliminate them from the blood.

Next: You cannot cure catarrh by local applications to the nose and throat, because these are simply local symptoms and such treatment can not possibly reach the real seat of catarrhal disease which is the blood; for this reason inhalers, douches, sprays and powders never really cure catarrh, but simply give temporary relief which a dose of plain salt and water will do just as well.

Catarrh must be driven out of the system, out of the blood, by an internal remedy because an internal remedy is the only kind which can be assimilated into the blood.

Stuart's Catarrh Tablets do this better than the old form of treatment because they contain every safe specific known to modern science in the antiseptic treatment of the disease.

Next: The use of inhalers, and spraying apparatus, besides being ineffective and disappointing is expensive, while a complete treatment of Stuart's Catarrh Tablets can be had at any drug store in the United States and Canada for 50c.

Farmers SHIP YOUR **Grain**
TO
THOMPSON, SONS & Co.
Grain Commission Merchants
Licensed and bonded under Manitoba Grain Act
WINNIPEG, MAN.

We handle all kinds of grain, obtain best prices, and make prompt returns. Money advanced on Bills of Lading. Enquiries re markets, etc., solicited.

Send Sample and Write for Prices.

The Nor-West Farmer

ISSUED TWICE A MONTH.

Established 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast. Issued on the 5th and 20th of each month.

THE STOVEL COMPANY.

Proprietors,

COR. McDERMOTT AVE. & ARTHUR STREET,
Winnipeg, Man.

Subscription to Canada or the U.S., \$1 a year, in advance. To Great Britain, \$1.50.

ADVERTISING RATES.

Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 150 lines.

Copy for changes in advertisements should be sent in not later than the 27th and 14th of the month to ensure classified location in the next issue. Copy for new advertisements should reach the office by the 30th and 17th of each month.

TO OUR SUBSCRIBERS.

It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favor if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS

Either on business or editorial matters, should be addressed simply "The Nor-West Farmer, P.O. Box 1310, Winnipeg," and not to any individual.

LOOK AT YOUR SUBSCRIPTION LABEL.

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof not be corrected before mailing day. But if the date is not correct on the SECOND issue, please notify us by postal card.

Look at the date label now. Are you in arrears? Are you "paid up" to the end of 1901? The label will tell you. If in arrears, please renew promptly.

Subscribers who miss any of the issues of "The Nor-West Farmer" should drop us a card at once and secure same, as we want every subscriber to get every copy. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, JAN. 21, 1901.



NAMES WANTED.

We are in receipt of two letters with subscription remittances enclosed, but which do not contain the names of the senders. One, from Moose Jaw, dated Jan. 12th, 1901, contained postal note No. 126,646 for \$1.50, for The Nor-West Farmer and Weekly Free Press. The stamp-mark on the envelope of the other letter is "Davins, Jan. 10th, 1901," and inside were \$1.00 cash and 50 cents in stamps for the Nor-West Farmer and Family Herald. If the writers of these letters will send us their names, we will forward their papers.

Subscribers cannot be too careful in writing us to give name and address in full.

—England is reported to have exported from the Southern States about eight and a half million dollars' worth of horses and mules and there are hardly enough left in Missouri to do the farm work.

VICTORIA THE GOOD.

Her court was pure, her life serene,
God gave her peace, her land reposed;
A thousand claims to reverence closed
In her as mother, wife and queen.

And statesmen at her council met,
Who knew the seasons, when to take
Occasion by the hand and make
The bounds of freedom wider yet

By shaping some august decree,
Which kept her throne unshaken still,
Broadbased upon her people's will
And compassed by the inviolate sea.

—Alfred Tennyson.

QUEEN VICTORIA.

For the last ten days the press of all the English speaking peoples, and, in fact, that of the whole civilized world, has been filled to overflowing with accounts of the lamented death, the public and private virtues, and the long,

navy had so well begun, and left Napoleon a prisoner on St. Helena. This long and terrible war had exhausted the resources of Europe and left England in a state of exhaustion of which we in the present age can have no conception. Just when things were at their worst came the birth of Queen Victoria.

Her father, Edward, Duke of Kent, was the fourth son of George III. The eldest, George, Prince Regent in the time of his father's dotage, and afterwards King, was known as the "first gentleman of Europe," the leader of the world's fashions as well as its vices. He had only one child, the Princess Charlotte, who married Prince Leopold of Saxe-Coburg, but died in childhood in 1817. There were irregular marriages among the other sons of old King George, but he had got a law passed to prevent the offspring of such marriages from succeeding to the throne, and after the death of Princess Charlotte, her uncle, the Duke of Kent, married the sister of Prince Leopold.



OUR LATE BELOVED QUEEN VICTORIA.

prosperous reign of the late Queen Victoria. It is no exaggeration to say that Queen Victoria will always be an outstanding figure in the world's history, and the Victorian era one of the most conspicuous for intellectual power and scientific, mechanical and social progress.

Her grandfather, George III., whose policy did much to alienate the American colonies and at last landed them in open rebellion, was a conscientious, well-meaning, but narrow-minded and obstinate man, with a full share of the monarchical spirit of his age and class, and the troubles, brought on by his own blunders and those of his ministers, led to periodical fits of insanity, which added their full share of trouble to the nation he governed. It was only the wooden walls of Old England and the splendid seamanship and heroic achievements of admirals like Nelson that saved England from being a prey to the unscrupulous ambition and splendid military genius of Napoleon. Later on Wellington and his lieutenants completed the triumph that the

whose only child, Alexandrina Victoria, was born at Kensington Palace on May 24, 1819. In eight months her father died, leaving her next heir to the throne, after her uncle, William IV. The Duchess of Kent proved an admirable mother and the young Princess was brought up and educated with the greatest care. The elder sons of old King George were Tories, but the younger ones Whigs, and the political ideas of the young Princess were largely moulded by such men as Viscount Melbourne, who may be regarded as her political godfather and was her first premier. She came to the throne of England on June 20, 1837, her uncle, the Duke of Cumberland, taking the Kingdom of Hanover. On Feb. 20, 1840, she married her cousin, Prince Albert of Saxe-Coburg and that same year her eldest daughter, mother of the present Emperor of Germany, was born. Her eldest son, now King Edward VII., was born the next year. The happiness of her public and private life has been a striking contrast to that of her grandfather and uncle, and may

be set down in great measure to the Coburg family of which her mother, uncle and husband were each honored members. No sounder adviser for his widowed sister and orphan niece could have been found than Leopold, afterwards King of the Belgians, and no public man of the century filled his place more worthily than did Prince Albert. His sudden and premature death in 1861 plunged the Queen and the whole nation in deep mourning, and it was a good many years before she could be again induced to take her place in public life. Her mother, the Duchess of Kent, had died a few months before her husband, and the double grief was a sore trial to a woman of her affectionate nature. She has since had not a few family bereavements, but has in all her trials had the growing affection and loyalty of the people of the greatest empire the sun ever shone upon. She was loved and honored, not only by her own subjects, but by the best people of every civilized nation. The name by which she has often been called, "Victoria the Good," was not given in flattery, but in all sincerity, and never till the last of her troubles, the Boer war, could even she realize the passionate loyalty of her subjects of all colors and creeds. Although occupying such an exalted position, her tastes were simplicity itself. Her devotion to duty as sovereign of a great people, the interest she took in all that pertained to the advancement of her people, but more especially her earnest, upright God-fearing life as wife and mother, have endeared her to her people and her memory will be long and fondly cherished by them.

EDWARD VII.

The eldest son of Queen Victoria, Prince Albert Edward, so long and well known as the Prince of Wales, was proclaimed King under the title of Edward VII. For nearly half a century he has been before the public in one capacity or another and since the death of the Prince Consort, and especially of late years, he has represented his royal mother on many occasions. His life, lived so much in public and open to so many temptations, has been exceedingly exemplary and as a ruler we have nothing to fear from him, as he is as devoted to duty as was his mother, the late lamented Queen. He is already responsible for many reforms, brought about through his position as the leader of English society and fashion. He is possessed of unfailing tact, a clear level head, and a very wide knowledge of the world. His power, as social leader, is perhaps greater than that of even the Czar of All the Russias, but he has used it wisely and well. He was born on November 9th, 1841, and thus is well up in years, but his long training as Prince of Wales has fitted him to fill his new position in every way, and no uneasiness is felt at his ascension as has sometimes characterized the ascension of an English king, but every confidence felt that he will prove a wise and acceptable ruler. May he long be spared to rule over us.

THE VICTORIAN ERA.

At the birth of Queen Victoria the British nation, exhausted by the terrible cost in blood and treasure of a bitter 20 years' war, was at its lowest ebb. British pluck and persistency had ensured the safety not only of England, but of Europe, and the resources of the nation had been terribly drained. Wages for working men were wretchedly low, and thousands of willing hands idle. Political discontent and poverty went hand in hand, and the people were only kept down by military force. The Reform Bill did something to allay this discontent, but it was only by slow degrees that the nation reached something like a condition of tolerable well being. Science in its practical applications did much to bring about this admirable change

Free trade, shipbuilding, growing manufactures, expanding commerce, increasing intelligence, and, shall we also say, growing virtue among nearly all classes of her subjects, have done much to elevate Britain in the scale of nations. The increase of wealth, comfort, and general well being among all classes of her subjects is a conspicuous feature in the reign of Queen Victoria.

The statesmen of the Victorian era have done their own share in promoting the well being of the British nation. Melbourne, the mentor of her early years, Russell, Peel, Wellington, Cobden, Bright, Palmerston, Disraeli, Gladstone, Salisbury, are only a few of the leading names that have contributed to the advancement of the British nation. The world's industrial exhibition, inaugurated by Prince Albert and held at London in 1851, was admirably conceived for the encouragement of arts and manufactures and the promotion of good feeling among the nations. This aspiration got a rude shock from the Russian war a year or so later, but the conception and execution were worthy of the good and sagacious Prince and the people who acted on his inspiration. The Crystal Palace in Hyde Park was the worthy pioneer of all that has been good in later exhibitions of the same kind.

In no way is the progress of the empire so marked as in the expansion of England's colonies. It has been even greater than that made by the mother country since she began to renew her youth under the reign of Victoria. New South Wales, the oldest of the Australasian colonies, was a penal settlement, the others had not yet come into corporate existence when Victoria came to the throne. Canada was, as far as regards Ontario, a few dots of settlement along the edge of the primeval forest and at her accession to the throne was seething with discontent under governors whose administration actually drove a portion of the settlers into open rebellion. Now Australia is a powerful confederation of prosperous people, whose loyalty to the throne has been proven of late as never before.

Confederated Canada is prosperous, united and vies in loyalty to the crown of England with her colonies all over the world. India, that mighty empire, is more English in spirit than ever before and her native princes have been as eager to evidence their love for the English empire and its ruler as are her natural born subjects.

Space forbids us outlining further the glories of the Victorian Era and the great progress that has been made in all the industrial arts. It is no disparagement of their value to admit that we have had, especially in the great republic alongside of us, rivals worthy of emulation. And it is not the least of the glories of the latest stages of the Victorian Era that the two great English speaking nations of the world are now realizing, more than ever before, their essential brotherhood and the blessings that human brotherhood must achieve for the world at large.

THE RATE TO FORT WILLIAM.

The papers of to-day hint at some strategic move on the part of Premier Roblin, by which wheat from Winnipeg to Fort William shall be carried for ten cents a bushel. There's something in it; let us hope it will be a fact in due time. Every cent saved in transportation means so much added to the farmer's price. This paper is not in politics—if it can keep decently out of them—but we need hardly say that any government or anybody else that makes a cut in freight rates deserves well of the people of the west. It would make a pleasant start to the century's farming if we could have the assurance that every bushel we reap can be carried to lake ports at a ten-cent rate from Winnipeg.

When writing advertisers, mention The Nor'-West Farmer.

CATTLE PRICES.

The Farmer does not profess to be able to see through the proverbial "brick wall," neither do we lay claim to a greater degree of astuteness than the average individual is endowed with, consequently, there are a few things "we want to know." Amongst others, we would like to know the reason why cattle invariably command a higher price in Chicago than at any Canadian market point. The common market for all surplus cattle, up to the requisite standard, is Great Britain. How comes it, that in spite of a higher home value, the Yankees are able to meet us on equal ground across the water? It has been argued that the quality of United States cattle is uniformly higher than ours. Every now and again, a stray steer, thirsting for foreign adventure and utterly ignoring the inconvenient formalities exacted by Uncle Sam's customs officials, finds his way over to the State of Montana and is in due course sent to Chicago with

ducer's hands until he is landed at his final destination and to compare, step by step, the cost of handling and transporting him by water and by land in Canada and in the United States. We will then be able to draw intelligent comparisons and to determine who is getting his fair share and who is getting more or less than is coming to him, out of the total value of a steer placed upon the British market.

We will be doubtless told that American cattle are worth more than Canadian at British points, and are consequently worth more in the hands of the producers. To be sure they are. But how about the inconsiderate stray who travels across the boundary line from Canada and immediately loses his nationality and commands the same price at Chicago as do the steers of his adopted country? Surely the change of climate from Alberta to Montana could not exercise such a very remarkable influence. If, however, it does, by all means let us arrange matters so that all our cattle will be exposed to its salubrious effect and while we are



KING EDWARD VII.

an outfit of strays and sold by public sale for the benefit of the owner of his brand, if he can be found. The following letter, which was copied in the eastern press some time ago, relates the outcome of such a case:—

"Regarding the Chicago market for Canadian beef, our company recently received a check from the Montana Stock Growers' Association (of which we are a paid member) for \$49.38, being net proceeds of one stray '76' steer sold in Chicago. The gross amount was \$70.65, and freight, duty and other charges amounted to \$21.27, leaving a net balance as above. This is beginning to open our eyes up here."

That there is something quite wrong here, cannot for a moment be questioned. The natural inference would be that the Canadian buyers are laying up treasures on earth at the expense of our cattle breeders; but this view is not borne out by the facts. Where, then, is the Canadian cattle business out of joint? Can any reader, be he buyer or seller, enlighten us, and incidentally several thousand inquisitive readers? What we want is to follow the steer from the moment he leaves the pro-

ducer's hands until he is landed at his final destination and to compare, step by step, the cost of handling and transporting him by water and by land in Canada and in the United States. We will then be able to draw intelligent comparisons and to determine who is getting his fair share and who is getting more or less than is coming to him, out of the total value of a steer placed upon the British market.

WESTERN HORSE INDUSTRY.

It was anticipated in all quarters that, on the principle that "it is an ill wind which blows nobody good," Western Canada might reasonably have expected that the outbreak of hostilities in South Africa and the enormous consumption of horses there, due to climatic causes, would have infused old-time buoyancy into the horse business. Over one hundred thousand remounts have been purchased in the United States, to say nothing of the heavy purchases in the Argentine Republic and elsewhere, and, judging from newspaper reports, buyers are scouring the civilized and uncivilized parts of the world in quest of precious horse flesh to replace casualties in South Africa, where we are told the average life of an imported military remount is six weeks. These horses are

said to cost the authorities \$360 per head landed in Cape Town, and it is certain that the producers have in all cases been well paid for their animals. John Bull has a reputation for doing things on no mean scale when he sets about them.

What, however, are the local manifestations of all this excitement in the horse markets? Are our breeders being pestered to death by importunate buyers to part with their pet horses at high prices? No! a light horse is not worth one cent more to-day than he was a couple of years ago. In fact, is he worth anything in the hands of the small breeder? Who wants to buy him? The position of the light horse industry in the west was fairly described by a noted breeder when he gave utterance to the following: "The more light horses you own, the poorer you are!"

We have in the Province of Manitoba a Horse Breeders' Association, and in September last a similar institution was organized in the Territories, and there can be no doubt that both these associations have a useful work before them, and it is with pleasure that The Farmer is able to state that they do not appear to shirk their responsibility, and seem well able to grapple with the important problems confronting them. In another column will be found the text of a letter addressed to the Hon. Sidney Fisher, Minister of Agriculture, by the Territorial Horse Breeders' Association, to which we would invite special attention.

The proposal that the Federal government should deal with the horse business in the west on the same basis as has been adopted in connection with the dairy industry, seems a thoroughly sound one. The principle of the scheme suggested is absolutely the same as is involved in the latter, and if it is good public policy in the one case, it is equally so in the other. It is also a fact that if the relative importance of the dairy and horse industries in the west are compared, it will be found that the result favors the latter in point of capital invested and general importance. By all means, let the government fall in with the idea. That is exactly what governments are for, to undertake schemes for the general advancement of the country, which cannot be successfully carried out by corporations or private individuals.

A great deal of discussion has taken place in the press on the subject of the establishment of Remount Depots for the Imperial army in Western Canada. It appears as though the time is not ripe for such a step. In any event, it is quite evident that the War Office is not as yet prepared to entertain such an idea. Representations have been made from time to time to the proper quarter, but owing to the adverse report of Col. Ravenhill, a score of years or so ago, the Imperial government views the proposal with disfavor. If the Dominion government could gather the horses there can be no manner of doubt that the War Office would send out a purchasing officer to inspect, and, if satisfactory, buy such animals. Even, if cold, hard business convictions would not induce the British army to obtain its remounts as far as possible within the Empire, sentiment would, at the present juncture, prompt the mother country to give preference to the colonies in such matters.

—The future of Canada does not depend on her mines, her fisheries, or her forests, but upon her agriculture.—Prof. C. C. James.

—Dr. Salmon, Chief of the Bureau of Animal Industry in the U.S., has written Dr. Bryce, Provincial Health Inspector for Ontario, expressing the hope that the Dominion Minister of Agriculture will not allow the discontinuance of the tuberculin test in Canada, after so much good had been done. The whole subject will come up for discussion at a convention at Ottawa next month, when the cattlemen will contend it should be abolished, and the medical men strive for its continuance.

REGARDING OUR PREMIUMS.

During the past two weeks we have sent out some thousands of copies of our premium "Things Worth Knowing." Already we are in receipt of letters from subscribers expressing satisfaction in regard to the usefulness of the book. We are mailing this premium as fast as possible, but we have been entirely unable to keep up with the pace with which subscriptions have reached us. The copy to each subscriber is being mailed as quickly as his name can be reached in its order on our books.

The January issue of The Western Home Monthly will be ready for mailing in a few days, and will reach all its subscribers in due course.

We have had some enquiry in regard to the pictures which we are offering with The Farmer this year. We have been careful to state in all our announcements that these pictures would be sent out during the year, but a few of our subscribers seem not to have noticed this fact. In order to be perfectly understood by all, we wish to again say that these pictures will be sent out one at a time during the year 1901.

It would be well to remember that only those whose subscriptions are paid in advance will receive these premiums. Notwithstanding the most satisfactory way in which renewals have reached us, there are still a few of our old subscribers who have not yet renewed. We would urge upon these the importance of attending to the matter at once, thus securing all premiums and avoiding the necessity of our dropping them from our lists and of their missing one or two copies of the paper before the renewal reaches us.

FACILITATING SALE OF SIRES.

With spring and the advent of the breeding season there will of necessity be an exchange of many bulls now at the head of herds; not from any defect in the bulls but because of the necessity of a change owing to heifers of their get coming on for breeding. Many an excellent sire has been sent off for beef at an early age simply because he could not be sold to advantage or exchanged with some one who was in a similar position. The cost of advertising these bulls for sale in the regular way is considered too expensive, and, unless some one happens to hear of them, animals that should still have many years of usefulness are slaughtered. Perhaps within a few miles there may be a man similarly situated who would be glad to exchange or even purchase the bull if he only knew of him. What we have said about bulls applies to stallions, boars, rams and other things on the farm. Let your neighbors know what you have for sale or what you want to get or exchange through the "Want Sale and Exchange" column of The Farmer. That is what the column is for. The price has been made very low—one cent a word—on purpose that it will not be expensive to make your wants, or what you have for sale, known, and thus be enabled to save money. In a recent issue Wm. Crothers, Pipestone, advertised for a stallion and Hy. Byers, Macgregor, tell, in "Among the Breeders," how he answered this advertisement and sold Mr. Crothers a horse. The cost of making known his wants was almost nothing, and he was supplied. Hundreds more could be supplied in the same way. Try it.

—Mackenzie and Mann are to build one of the largest elevators in America next season at Port Arthur. The contract has been let for its construction, and the plans show that it will have a capacity of 1,500,000 bushels and will cost \$350,000. It is to be ready by September of this year, so that the Canadian Northern will be in a position to handle its share of the grain trade of the west.

TREE PLANTING IN THE WEST.

The Farmer is pleased to learn that the Dominion government are at last going to take hold of the question of tree planting on the prairies in such a practical way as is outlined by E. Stewart, Chief Inspector of Timber and Forests, elsewhere in this issue. This is a move in the right direction. The setting apart of large timber reserves such as has been done is another good move, but this has been done by order-in-council only. As these orders are open to be changed readily, the timber reserves should be set apart by Act of Parliament and thus put upon a more permanent footing, because they are of the greatest importance to this country.

The plan of utilizing the knowledge gained in every district in tree planting, by engaging supervisors possessing this knowledge, is a move we cannot commend too highly. There have been too many failures in the past to allow of any more in this important work. To make the work successful, farmers must co-operate with the supervisor and do their share. This they no doubt will, for all know the value of the shelter the trees afford from the searching winds.

The Farmer is pleased to see that the Department of the Interior is starting the new century with such a good move. It is to be hoped that this is only the beginning of more good things for the west. Eastern men say that the western men are always "kicking" about something, but when men come here from the east it is not long until they are as big, if not bigger, kickers. Regulations for governing this country, which were once all right, now need changing. The rapid settlement and development of the west calls for new regulations along many lines. The Farmer has pointed out the need of a revision of the land regulations, the conditions governing grazing leases and water rights, etc., in the Territories, and it is hoped that the progressive policy now shown will be extended to them in this the opening year of the new century.

TRAINING FARMS FOR YOUNG ENGLISHMEN.

One of the great difficulties which young Englishmen have to face in leaving England and coming to this country is their lack of experience. To meet this want, the government of New Brunswick have established a training farm, at which educated young men may receive a thorough training in agriculture with an outlay of between \$150 and \$200. This sum is to pay for breakages in farm machinery, which usually suffers more or less in the hands of a beginner, at any rate during the first year. The farm is, however, worked so as to be self-supporting; it consists of 900 acres, and it is in charge of an Englishman, A. W. Pratt, a graduate of Cambridge and of the Royal Agricultural College at Cirencester. It is inspected from time to time by government officials, who see that nothing is neglected in the way of modern improvements. This idea meets with considerable favor with certain classes in the old country, and is one which could perhaps be worked in connection with an agricultural college, when one is established in Manitoba. It has its drawbacks, however, and many good men prefer to get their experience from the every-day farmer.

—An Austrian electrical firm are credited with having devised a new system of electric traction which will do for the full-sized railways what has been possible in the past with only street car lines. It is stated that the new Austrian system is as far ahead of the best American system as that is claimed to be ahead of the English plans. The day is not far distant when numerous cross country electric lines will serve as feeders to the main arteries of the country—the steam roads.

PRIZES FOR ARTICLES FOR HOUSEHOLD DEPARTMENT.

We have always felt that the Household Department of The Farmer was an important one. The "good man of the house" reads through all the other pages and finds in them a great deal which interests and instructs him, and he is satisfied. But his worthy spouse finds in the household pages that which comes closest to her life and work. That these pages are read—and closely read, too—by the farmers' wives (yes, and the boys and girls as well) we have had ample assurance.

Two years ago we had a series of competitions, offering prizes to subscribers' wives and daughters for the best articles on various household topics, and the response was so satisfactory that we propose to again institute a similar series of competitions. All subscribers' wives and daughters will be eligible to take part.

COMPETITION NO. 1.—For the best article received by us by Feb. 25th, 1901, on the subject of "Fruit for the Home—How to Preserve It," we will give a cash prize of \$2.50. As a second prize on this subject, we will offer a copy of "Youth's Educator for Home and Society," a most handsome book of 350 large pages, artistically illustrated with beautiful chromo plates, and dealing in its subject matter with the whole realm of business and social etiquette, toilet recipes, etc.—in short, a book for the home. As a third prize, we offer "Samantha at Saratoga" (that humorous book by Josiah Allen's Wife); also "Dairying for Profit, or the Poor Man's Cow," by Mrs. E. M. Jones, Brockville, Ont.

COMPETITION NO. 2.—For the best article received by us by February 25th, 1901, on the subject of "Reading for the Farm Home" (selection, dangers to be avoided, reading to a purpose, etc.), we will give a cash prize of \$2.50. As a second prize on this subject, we offer The Chicago Record Cook Book, a book designed to furnish the secrets of "good living," and containing 1,100 prize menus with recipes, carefully indexed. This book is strongly bound in cloth cover and contains 607 pages. It is considered one of the best books of its kind ever published. The third prize will be the same as that offered in Competition No. 1.

RULES OF COMPETITION.

All manuscripts must be received at this office by Feb. 25th, 1901.

Writing to be confined to one side of the paper.

All manuscripts submitted to become the property of the publishers.

Prizes will be announced as soon as the awards have been made.

No article will merit a prize unless suitable for publication purposes.

\$5.00 FOR BEST PLAN.

On page 24 of our last issue we offered a cash prize of \$5.00 for the best plan for the arrangement, or lay out, of farm buildings suitable for a half-section of land where mixed farming is followed. Look up last issue and then see what you can do at making a plan. All plans for this competition must reach this office by the 20th of February, 1901.

—J. Obed Smith has been appointed Commissioner of Immigration, with headquarters at Winnipeg, in place of W. F. McCreary, who was elected member for Selkirk.

—Henry Ardington one of the best known pioneers of the Boyne settlement, died on Jan. 17th. He came to the district in 1879, and has been ever since a conspicuous man in his district. He has been eight years president of the Farmers' Elevator Co., of which company he was one of the originators. He came to Canada 47 years ago from Yorkshire, his native county.

—The Farmer regrets to learn that W. A. Doyle, of Beulah, has fallen into poor health and will be forced to go south for the winter. Mr. Doyle is one of the best known men in Western Manitoba and we trust that in a warmer climate he may be restored to wonted health and usefulness.

—The directors of mutual fire insurance companies are this winter finding themselves in a very tight place. They had more losses last year than ever before. The losers are naturally anxious to get hold of the whole or part of the money due on their losses, but the men who were not hailed are this year slower than ever in forking out the dollars to meet their premium notes, and the unhappy directors are now at their wits ends.

OUR PREMIUM PICTURES.

During February we will issue the first of our series of premium pictures. It will be a nicely finished portrait of our late lamented Queen Victoria, size 10x14 inches, suitable for framing. Coming at this particular time, it should, and no doubt will, be appreciated by our readers. The next picture to be issued will be a portrait of King Edward VII and the Princess Consort. These will only be sent to our subscribers who are paid in advance at the time the portraits are mailed, and we cannot promise them to those whose subscriptions are received after the pictures are issued, as the supply will be limited. If you have not already sent in your renewal, do so at once, as these portraits should be in every home in Western Canada.

On Her Feet

All day long and racking with pain from her head to her heels. That is what many a self-supporting girl must experience. On those days each month, when in other circumstances she would go to bed, she must still be at the desk or counter and struggle through the day as best she may.

Backache, headache, and other pains caused by womanly diseases are perfectly cured by Dr. Pierce's Favorite Prescription. It cures the cause of these pains. It establishes regularity, dries enfeebling drains, heals inflammation and ulceration and cures female weakness. *It makes weak women strong and sick women well.*

PAIN ALL GONE.

"I have taken your medicine with the greatest satisfaction," writes Mrs. George Riehl, of Lockport Station, Westmoreland Co., Penna. "Your 'Favorite Prescription' has cured me of uterine trouble that I suffered from for fifteen years, and painful monthly troubles. I can honestly say I can work a whole day and not get tired, and before taking Dr. Pierce's medicines I always felt tired. My pain is all gone and I feel like a new person. I suffered with headache all the time, but have no headache now since taking your medicine. I have been cured of troubles that I suffered from for fifteen years, and the best doctor in the state could not cure me."

Dr. Pierce's Common Sense Medical Adviser, in paper covers, is sent free on receipt of 31 one-cent stamps to pay expense of customs and mailing only. Address Dr. R. V. Pierce, Buffalo, N. Y.





Insects of the North-West for 1900.

The second annual meeting of the Northwest (Canada) Entomological Society was held at Lacombe, Alta., on Jan. 16th, 1901. It was a meeting essentially in the interests of farmers. The chair was taken by F. H. Wolley-Dod, of Calgary, who was supported by several well known farmers of the district.

P. B. Gregson.

A number of letters in support of the objects of the society were read, including letters from C. W. Peterson, Dep. Commissioner of Agriculture, N.W.T., Prof. C. C. James, Dep. Minister of Agriculture, Ontario, Dr. Jas. Fletcher, Dominion Entomologist, and The Right Rev. the Bishop of Calgary and Saskatchewan.

PRESIDENT'S ADDRESS.

The president of the society, Percy B. Gregson, on being called upon, explained that he had especially invited farmers to be present, because he wished to show them that the work of the N.W. Entomological Society is a work undertaken for the benefit of agriculture. Continuing, Mr. Gregson said:—

At our first annual meeting, I made some observations on the use of entomology. I said that its use is two-fold. It enables the farmer to distinguish his insect friends from his insect foes, and we have very many insect friends, indeed, which in ignorance or carelessness are often destroyed either as foes, or with our foes, and it also shows how we ought to fight our insect foes—what remedies to use. A year has gone by since that meeting, and it will be well to see how far this society has carried out this programme. It was formed chiefly to interest and instruct farmers regarding the insects and weeds that affect them—to bring home to them individually the principles which underlie the treatment of insect and weed pests, so that they can tackle them in time, without waiting, as many do, till their crops are destroyed and then applying for advice. A society of any kind is the mutual and harmonious working together of a number of persons, and so, among the members of our society are included a number of practical farmers, resident in different parts of the Northwest. These farmers are individually on the look-out for insects and take care to observe and report on their habits as far as possible. But every rising town has an agricultural society, at whose hall farmers meet to discuss prospects of crops, damages to them, and so on, and it is our aim to interest these agricultural societies in our work. In addition, therefore, to individual farmers, a number of agricultural societies have enrolled themselves as active co-operating members of the "bug" society (as our Northwest Entomological Society is familiarly called), and from the reports of their secretaries, I am often able to render prompt service in the way of putting at once before them the efficient and simple remedies recommended by our valued and amiable Dominion Entomologist, Dr. James Fletcher, of Ottawa.

It is one of the most encouraging signs of the times that farmers are beginning to appreciate the value of entomology. I may mention that on 13

occasions, at various places during 1900, I was requested to speak a few popular words on the subject. I hope this year more agricultural societies will join. I have noticed that very many of the farmers do avail themselves of the remedies recommended. Many gentlemen now present may say that they know all about insect pests and remedies. I wish every farmer did know all about them, then one of our objects would be accomplished. But in these days of increasing immigration there are great numbers from other lands flocking into our great Northwest, all of whom are just as liable to be troubled by insects as we are, and it would be a selfish and, indeed, a short-sighted policy did we not help these newcomers to control them.

A FIELD CLUB.

Another part of the work begun since our first annual meeting is the formation of a field club, consisting of our young folk. It costs nothing to join, and the object is to encourage the young to study nature as we find her, and to watch the habits of insects and plants. Of course, in the case of insects it will be necessary for our young people to collect specimens, not only of the insect itself, but to rear them from their early stages and see how they feed, and what they feed on, etc. I want this to spread and grow to be a very large club, and parents can help more than perhaps they realize, in stimulating in their children an interest in this direction. The young of our day are the men and women of the near future, and the knowledge they attain now of insects and plants around them will stand them in good stead in the future. The collection and study of insects and plants is nothing to be ashamed of. The part which insects play in the world is too little understood. By having a very simple knowledge of the life habits of certain insects and timing seeding operations accordingly, much in the way of saving crops can be done by the farmer. In the same way the knowledge that flies detest carbolic acid is utilized by the practical farmer. He has learnt that a solution in which carbolic acid is conspicuous will ward off flies and keep wounds clean. There are numberless instances in the hot June weather where, after calving or lambing, the application of this solution has saved the life of the mother. So, again, the knowledge that lice, sheep ticks, and the vast majority of insects and grubs breathe through little openings (called spiracles) on their sides, is utilized by applying something that will spread over and clog up these spiracles, and thus suffocate the insect where no way of killing it by poison is practicable. Insects that suck, like lice, ticks, mosquitos, etc., come under this head—no poison can reach them, as their sharp beaks would pierce through any poison. But insects that nibble with jaws, like the potato beetle, or a caterpillar, are readily killed by putting a poison like Paris green on their food. This, in fact, is a fundamental lesson of entomology. To this extent the farmer who understands these things is already an entomologist. And the remedies are not costly in comparison with the good they do—even in the Northwest. For a small sum you can buy enough Paris green (say 1 lb.) to mix with 160 gals. of water, and a little lime can always be got. For 50 cents you can buy kerosene enough (1 gallon) to make, with half a gallon of soapsuds, an emulsion to allow an addition of 10 to 15 gallons of water. Every farmer should keep in his house, in a safe place, during the spring and summer months, a small quantity of Paris green, or green arsenite, and coal oil emulsion. If kept in a dry cool place, these will keep any reasonable length of time.

ACCURATE OBSERVATION.

Now, gentlemen, with regard to distinguishing between insects, I do not want you to think that it is necessary for you to sit down and study entomology with all its long names and so forth, but I do think that every farmer should cultivate a habit of most

careful observation. It is often found that though farmers are most willing to give all the information they can about insect troubles, yet such information has been of no use because of the omission, perhaps, of some essential detail. The farmer should learn, if possible, to describe the insect in such a manner and by such terms that an expert entomologist can identify it. A specimen (several, if possible) should always be sent to the entomologist. And careful observation is important in another way. Last July I was walking with the proprietor (a practical farmer and one of the earliest settlers in Alberta) through a cropped field, and I noticed every now and then he stooped to crush something. I found it was that bright scarlet little beetle known as the lady-bird. He said, "I always destroy them things." His intention was good, but he had never before understood that any beetle could be beneficial. A lady-bird is among our best friends. It and its larvae devour an amazing quantity of plant lice; and even the potato beetle (in its larvae stage) is not safe from them. A little observation will soon show the farmer that there are differences he can recognize among beetles, so that he will not destroy them indiscriminately. For instance, a large class of beetles have snouts. These he may safely destroy. They are of the weevil order and live entirely on vegetation. But any large beetle he sees running about on the ground having jaws, he should think twice about destroying. These probably are in search of cut worms. And so the difference between the three-lined potato beetle, or the red turnip beetle, and lady-birds he will soon learn by observation. But if the farmer cannot trust himself to give an accurate description of the insects complained of, he should be careful to give an accurate description of the injury caused by the insect. From the nature of his occupation the farmer is perhaps better able to give an expert description of damage done to his crop than any insect he may see, and from the description of the injury, if it be exact, the entomologist can pretty surely deduce the kind of insect to be dealt with, without the farmer even having seen it. In any case, however, whether we intend to describe the insect or the injury, the description should be complete and exact.

Careful note of the life habits of insects can generally be made by the observant farmer. For instance, he will be able to see that after a crop of wheat has been attacked by Hessian fly, the fly does not again appear in the fall, but passes its existence during the winter in the pupa (or flax-seed) stage, and hatches in the spring. The thing to do, therefore, in this case, is to time the sowing of your wheat or barley so that the young blade should not appear till a week or ten days after the date when the fly hatches; for the fly when it hatches must lay its eggs somewhere, and not finding any crop, it must go elsewhere. Happily, 1900 was free from Hessian fly in the Northwest. This is but one illustration out of many where observance of the life habits of insects will often enable us to ward off an attack by simply timing our date of sowing. In a similar way the knowledge that the common garden cut worm cannot climb smooth surfaces has been utilized by simply wrapping the young cabbages around with smooth paper when planting. There are many such ways of observation the farmer can cultivate, and he will soon become a close and habitually careful observer of insects and their ways.

Insects always follow cultivation. The trend of migration, both of insects and weeds, is from east to west, and as this country gets cultivated, so also must we expect arrivals of fresh insects. There are very many ways by which insects are always liable to be imported into a new country; they may come in clothes, lumber, fruits, or in their natural food, on domestic animals, in crevices in vessels, or they may come in packing substances, such as straw or grass. This is probably

TUMORS.

Our remedy is pleasant to use and the cure is permanent. Particulars free.

STOTT & JURY, BOWMANVILLE.

how all the grass-stem maggots, common to Europe and America, have reached us, including the Hessian fly, the wheat midge, and wheatstem saw fly. Most of our granary, household and greenhouse pests are also imported. On the other hand, there are pests which seem to be peculiarly western, such as the red turnip-beetle, and new as our Northwest is, we have already a pretty long list of injurious insects. The following is the list of the principal injurious insects of 1900, and in presenting it, I take the opportunity of thanking Mr. T. N. Willing, the Territorial Weed Inspector, and the district weed inspectors and other gentlemen who have kindly reported.

INSECTS OF THE YEAR.

The Red Turnip-Beetle (*Entomoscelis adonidis*).—In many places, from south of Calgary to north of Edmonton, in Saskatchewan, and several districts in Assiniboia, this beetle has been more or less abundant, in some instances devastating entire fields. Around Beulah, in Manitoba, it has also been somewhat abundant, but chiefly confined to mustards. This beetle, having jaws, nibbles its food. The obvious remedy, therefore, is to place poison on its food.

Remedy.—Spray the plants with Paris green solution (1 lb. to 160 gals. of water) and stir in also 1 lb. of quicklime or if in small quantity, $\frac{1}{2}$ oz. of Paris green, $\frac{1}{2}$ oz. of quicklime, and a pailful of water. In mixing Paris green, Dr. Fletcher recommends that it should first be made into a paste with a small quantity of warm water, and the paste afterwards mixed with the larger amount of water required. If it does not adhere readily to the leaf, a little soap added to the water will overcome the difficulty. A little investigation around the base of the turnip, under clods, etc., soon after discovery of the beetle, will reveal where it lays its eggs. A good preventive remedy is to grow a different crop on the place next year. Rotation of crops is one of the surest preventives that can be adopted in all cases, because very many insects lay their eggs in the fall in the vicinity of the recent food of the larvae, and when the larvae hatch in the early warm days of spring and find no crop or a strange crop, they will starve. Insects which eat turnip leaves will not eat potato leaves.

The Turnip Flea-Beetle (called by mistake turnip "fly") (*P. vittata*) has been very general throughout the N.W. T., but the damage done was not great, owing to a counter attraction in the shape of mustards.

Remedy.—Dust the young turnips with dry Paris green and land plaster, or dry Paris green and sifted ashes, when the dew is on the leaves. This little beetle hatches in May (about the third week), and if we defer sowing our turnips till June, the beetle will have hatched and disappeared to native cruciferous plants, such as mustard or wallflowers, before the young turnips are up.

The Diamond-Back Moth (*P. cruciferarum*) in June and early July was tremely abundant throughout the Territories and in many parts of Manitoba. Practically the whole of the cultivated area of Alberta, Assiniboia and Saskatchewan, and parts of Manitoba, were visited by this pest, and many fields of cabbages, cauliflowers and turnips were completely destroyed. The larvae of this moth also attacked lettuce, radish, rape, etc. A field of turnips badly infested with this pest presents a weird and ghastly appearance. The riddled leaves are bleached and white, like skeletons. Parasites have destroyed immense numbers of these insects by laying eggs in the larvae.

Remedy.—for the turnips, young cabbages, etc., except lettuce, Paris green solution, as recommended for the red turnip-beetle. The difficulty is in getting at the underside of the leaf, as the larvae principally attack from the underside. In the case of lettuce, hellebore should be used. Scatter on the leaves when damp with dew a mixture of 1 lb. of hellebore to 2 lbs. of sifted ashes.

The Colorado Potato-Beetle (D. decemlineator) has again made its appearance in Central Alberta, though not in large numbers. On 28th June both larvac and mature insects were seen in several potato fields, but no great damage was done. This is the second year this insect has appeared in Alberta, and as it is possible that these are advance guards, it is well to look out for them.

Remedy.—The same as for the red turnip-beetle. Do not kill the lady-birds.

The Three-Lined Potato Beetle (L. trilineata) has been more troublesome than the Colorado beetle. In some localities in the south of Central Alberta it has seriously damaged potato crops, but its presence elsewhere is not reported. This beetle was the chief insect pest of the potatoes in Ontario until the arrival of the Colorado beetle, which it seems to have heralded. Remedy, the same as for the red turnip-beetle.

The Rocky Mountain Locust has been very bad in parts of Manitoba, north of Douglas and around Aweme. This pest is dealt with in the May 21st issue of The Nor'-West Farmer, so I need not repeat it here. The insect lays its eggs in the soil among the stubble in the early fall (August and September) and they hatch in the following spring. If, therefore, the soil be deeply fall plowed, the eggs will be buried so deep that the young, when they hatch, cannot get to the surface.

Cutworms.—In Alberta and Assiniboia principally, the garden ones, such as A. clandestina, P. Brassicae, and C. ochrogaster, have caused the usual amount of loss in several districts. Many cabbage growers have had to replant their crops, though around Edmonton, where last year they were numerous, there has been a marked absence of them this year. It is difficult to understand why there need be any loss from this pest when the remedy is so easy.

Remedy.—Take, say 50 lbs. of bran and very slightly moisten it with water and sweeten with a little sugar. Then mix well with it enough Paris green to just color the bran, say about 1 lb. of Paris green. The cutworms will eat this bran in preference to the cabbages. The common cutworm is not a climber, so wrapping a piece of smooth paper about three inches in breadth around the stem of the young cabbage when it is planted out is another preventive remedy. The paper should be half an inch below the surface of the ground and 2½ inches above. Keep the garden clean of weeds and rubbish in the fall, so that the cutworm moth will have no attraction for laying its eggs. A more serious trouble, however, has been caused by another kind of cutworm in Manitoba. This is the glassy cutworm (Hadena devastatrix), and it, in the spring, committed very serious injury to wheat crops north of Stonewall. This pest was present in some fields in thousands, and marched in a phalanx, devouring as they travelled. The remedy for the glassy cutworm is not easy. The grub burrows in the earth during the day, and comes to the surface to feed at night. It eats the whole plant, beginning just below the surface. Thoroughly spraying the grain along the front of their attack for a space of ten feet with a solution of Paris green has been found successful. If, however, the crop has been ruined, turning chickens, or turkeys, on to the field for a day or two, and then sowing oats for green feed might be tried.

Wireworms (larvae of crane-flies, or "daddy-longlegs" and click-beetles).—This is a pest very difficult to get at. There are several different species of

THE WESTERN CANADIAN HAIL INSURANCE COMPANY

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AUTHORIZED CAPITAL, \$500,000

JOS. CORNELL, Sec. and Manager.



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wireworm. They pass the winter in cells in the soil, so that for some species a ploughing in August, and for others a ploughing late in the fall, will disturb these cells and kill the inmates by exposure. Seeding down only encourages the wireworm, but barley and rye seem distasteful to them, and fair crops of these can be grown, even if the field be badly infested with worms, and possibly the field itself be ultimately cleared of the pest.

Among pests of foliage has been the pallid aspen beetle (Gonicitena pallida). The loathsome larvae of this beetle were very abundant in the spring, visiting nearly every aspen poplar and destroying much of their beauty. This pest was especially abundant in the Red Deer district of Alberta and the N.E. of Assiniboia. These larvae marshal themselves, often as many as a dozen on a leaf. Remedy.—Poison their food by spraying with Paris green solution.

The Striped Cottonwood Beetle (Lina scripta).—The fetid larvae of this beetle were locally abundant on willows and cottonwood. They emit when disturbed a milk-like fluid from tubercles along their back, and trail a sticky fluid wherever they crawl upon the leaf. This is a very troublesome pest in the east, in districts where osiers are cultivated. The larvae, as well as the beetle, cause the osier canes to branch by injuring the tips. Should osiers be cultivated in the Northwest, this pest will have to be reckoned with. Remedy.—Paris green or green arsenite solution sprayed on the food.

Lice on trees and plants.—Poplars and plants in parts of Alberta have suffered from this pest. Noticing the habits of lice, we see that they have their trunk-like beaks embedded in the leaf or stem. No poison on the plant can therefore affect these insects, and the obvious remedy is to suffocate them by clogging up their spiracles, or breathing holes, with oil, e.g., coal oil emulsion or fumes of tobacco.

Other pests to foliage were leaf miners, which ate the interior of leaves of many cottonwood trees around Medicine Hat. Remedy.—When once the larva has entered the leaf, it is difficult to get at it, except possibly by some penetrating liquid like coal oil emulsion, but a solution of Paris green or green arsenite sprayed on the leaves will doubtless prevent the attack.

Among the minor pests, gall gnats of various kinds were generally abundant on willows. The negundo leaf gall gnat affected the maples throughout Assiniboia in June. The same trees in October had on them large clusters of the box elder plant bug (Leptocoris trivittatus).

The Western Blister Beetle was reported like swarms of bees on beans at Lethbridge, in Southern Alberta, in June. On wild vetches in central and northern Alberta the Cantharis Nuttalli (Nuttall's blister beetle) was very abundant.

Fleas, in households, towards the end of summer became an almost intolerable nuisance throughout the Northwest. It was surmised that they had been driven by some cause from the prairie to the houses. They existed in hay mattresses in great abundance. I found a slight odor of carbolic acid effectually prevented fleas from coming into a chamber so scented. Burning pyrethrum powder is a good remedy for driving them out of a room.

Warbles in cattle appear to be on the increase. Cattle farmers are very well acquainted with this fly, but it is a trouble that is too apt to be treated as of not a very serious nature and as not preventable. This, however, is a great mistake. In the first place the bot maggot, or warble, so damages the hides that grubby hides sell for one-third less than sound ones. But

the beef itself is rendered so inferior that buyers of the highest class of meat, who supply hotels, etc., will not on any account buy carcasses showing traces of warble attack. Such beef has, therefore, to be sold at a lessened price below that obtainable for good beef, the reduction ranging from \$2 to \$5 per carcass. In view of the large and increasing exports of beef (cold stored) to England, it becomes important to see that the reputation of the Northwest is sustained by keeping stock free from this pest. In dairies, too, there is a loss in quantity of flow of milk, as well as deterioration in quality, resulting from the annoyance of the animals by the flies when depositing their eggs, and later by the grubs. The shrinkage in the milk is estimated at ten per cent., and the deterioration in quality at the same rate, making a total of 20 per cent. By the time the warbles are discovered in the spring, the mischief is done. Certain localities are more particularly infested than others, and a dry season seems more encouraging to the warble fly than a wet one, and where there is danger of the warble the animals should be protected during the summer months by spraying them occasionally with strong smelling oils, such as fish oil, train oil, kerosene emulsion, diluted, or rancid butter.

To make kerosene or coal oil emulsion, add to 1 gal. of kerosene hot soapsuds made of half gal. of water (rain water preferred) and quarter-pound of soap. Then churn all thoroughly together till it will adhere to the surface of glass without oiliness. When required for use, dilute the emulsion by adding from 9 to 15 times its measure of warm water.

In making Paris green solution, it is a good plan to mix the Paris green and quicklime roughly together before adding the water. Then add enough water to slake the lime, and mix thoroughly while hot. This will incorporate the lime and Paris Green completely, and the remainder of the water and soap can then be added.

Across the Line.

There seems a little waking up among the Agricultural Societies since the new arrangement came in. But a good deal more is made of institute work south of the line than with us. At Pembina, for example, several speakers will be present, flags will be hung out and music provided, along with considerable variety of intellectual entertainment as well. For this and other reasons hundreds of people will come in, some from pretty long distances, and all the world will know that the farmers are holding a big levee. There is no necessary connection between brass bands, flags and processions and improved farming, but it draws a crowd and everybody is satisfied.

Farmers' Mill Burned.

The Farmers' mill at Fort Saskatchewan, a new structure, and the elevator adjoining it have been burned to the ground. This is a most serious loss to the whole district. Many farmers in the surrounding district had nearly all of this season's crop stored in the elevator and were also shareholders, and the 30,000 bushels of wheat are a total loss. A large quantity of flour was also destroyed. It is believed that settlement in the foundations, leading to friction in the machinery, was to blame for the fire. The mill will be rebuilt.

Pulped carrots are excellent for young calves.

Wheat at Rothamstead in 1900.

Sir. J. H. Gilbert has issued a report on the wheat crops on the great experimental farm founded, and for 60 years carried on by the late Sir J. B. Lawes, with Mr., now Sir Henry Gilbert, as coadjutor. All English wheat is fall sown, and the winter was an extra wet one. Then came a dry summer almost like our own, and a wet harvest. For 57 years in succession the same plot has been grown, without any manure, with a regular average of fully 12 bushels to the acre. Last year it was 12½. On plots manured with farmyard manure the yield ran on averages of 34 to 41 bushels, last year it was 33½. Plots manured with artificials ran up to 40 bushels, with a mean of 38½. Last year it was 33½ bushels per acre.

It is known that the tile drainage underneath carries off some amount of nitrogen and last year the only plot that ran above the average was one that had an extra amount of nitrogenous manure. The weight of the wheat has always hovered round 60 pounds per bushel. The acreage in England under wheat for the year, Sir Henry puts at 1,898,839 acres, with an average yield of over 27 bushels per acre. But it must be understood that this yield is made from the very best land in England, specially worked and manured—often also summer fallowed.

The Director of Farmers' Institutes in North Dakota is arranging for another big grain and stock growers' convention in Grafton, N.D., on March 12, 13 and 14. A very successful convention was held at Fargo last spring, and it is expected that this one will be equally as successful.

The header is now superseding every other form of harvester in the wheat fields of Argentina. The men who raise the crops there are nearly all Italian laborers working on shares, and they take all the easy ways of doing things, with little regard to economy. The header saves binding twine, and he sees no further. Four oxen are used to work these machines and they plod along from daylight till long after dark. They handle all their work in a slipshod, ignorant way and in bad harvest weather the crop is wasted accordingly.

The wheat crop of France has this year been a few millions bushels less than the average of the last ten. Her 1900 crop was about 310,000,000 bus., while the crop of 1899 was 364,400,000 bus. Agriculture seems to be in a bad way in France. The "Journal d'Agriculture Pratique" states that the coming of winter finds the French farmer in very poor shape. Wheat has turned out far below the average, and the bountiful American and Russian crops prevent any augmentation of the price of the cereal. The vine-growers find themselves but little better off. Prices of fat stock leave the feeder small profits and the severe autumn drought spoiled the fall forage crops completely. Therefore, a scarcity of winter feed is assured and the prospect is by no means pleasing.

Everyone who has a garden, and that means fully two-thirds of our readers, frequently feels the need of some book, which will direct them as to manner of planting, and care of the various kinds of crops. The new catalogue published this year by J. M. Perkins, of Winnipeg, answers this description. It is a very complete book, containing hundreds of illustrations, and descriptions of the most prominent varieties. It is written in a practical way, so that it will be of much benefit to farmers, gardeners and flower lovers. The publisher informs us that he will mail a copy free to any of our readers who ask for it, and mention The Nor'-West Farmer.

The Institute Season.

The Farmer is gratified to learn that the recent change in administration, by which the Agricultural Societies are required to take up institute work as a part of their programme, is being heartily accepted by the farming community. Places where very little attention has been paid in the past to such topics are now being treated to discussions on practical questions by local men, in addition to the assistance sent out by the Department of Agriculture. Such discussions are well fitted to clear up perplexing questions and cannot be too numerous. The Farmer will be greatly pleased to report the substance of all such discussions and make space for a lot of such matter in its future issues. Local reporters should write only on one side of the paper. If we do see reason to discuss, or qualify, the views of any speaker, it will always be done in a kindly spirit. The Neepawa Society is a strong one and one of its last meetings has been pretty fully reported by the local papers, a course we strongly recommend to others of our country exchanges. But whatever they may do, or leave undone, The Farmer will be glad to hear from secretaries and to use papers of general practical interest.

THE NEEPAWA SOCIETY'S MEETING.

The meeting of the Agricultural Society was fairly well attended, and the proceedings were more than ordinarily interesting from the fact that several carefully prepared papers were read by prominent members. The blending of the Farmers' Institute and the Agricultural Society has seemingly proved beneficial. G. S. McGregor occupied the chair, and John Brown acted as secretary in place of John Wemyss, who was not well enough to be out.

Stephen Benson read a paper on the Labor Question, of which the following is a condensed report:—

HIRED HELP.

The labor question is one of great importance to the farmers of Manitoba. Our main labor supply at present are Galicians and Doukhobors. Galicians are useful for common labor, such as handling a fork or digging a ditch, or any rough, hard work which can be performed without the exercise of much thought. They do not, as a rule, make good teamsters. They seem to have no idea of the proper method of handling horses. This country requires a superior quality of farm labor, and Ontario has the class of men we need, if we could only give them proper encouragement. We are forced to pay high wages in summer for such men and part with them as soon as we can do without them. This is a very unprofitable system. We should try, by feeding good stock in winter, to provide work for good men all the year round, instead of letting them drift back to Ontario, and being compelled to hire strange men every spring. If the conditions were favorable, good men would stay with us all the year round, till they could save money enough to start on their own account, which would be good for both parties, and benefit the country too. If they can be got, married men are the best. They can board at home, thus relieving the wives of employers of much of the hard work, and to a great extent solving the hired girl question. Wages are regulated by the law of supply and demand, and in poor years wages are correspondingly low. In good years farmers can afford to pay good wages. The worst fault of the Galicians is their fickleness, they seem to like changing from place to place, and the only way to get any satisfaction from them is to bind them down to some definite period.

J. H. Irwin followed on the same subject, but along somewhat different lines. He thought farmers should not call themselves progressive while they were in need of so much more help in summer than winter. Hired help becomes more valuable with time. It takes time for a man to get used to an employer's ways and interested in his plans. He needs time to learn the disposition of horses to handle them efficiently, and every change means loss to the farmer, new help having to learn anew. This means loss of time and money. Times are good in Ontario and wages high, and the labor problem next season in Manitoba may be a serious one. When a farmer gets a good man he should encourage him, and not be afraid to let him know he is appreciated. Disrespectful things are often said to a man when he makes a mistake, but when he does his duty thoroughly, nothing is said of it. This treatment is not calculated to hold good men. Mixed farming is the solution of the problem of how to retain farm help the year round. Mixed farming gives greater returns in the way of cream, butter, meat, eggs, etc. The value of straw as feed is \$1, and as manure \$2. Yet farmers burn tons of it, when they should feed it all. A quarter section will keep 25 cattle; six of these will pay a man's wages for the year, leaving 19 for the farmer. The great trouble with farmers in Manitoba is that they work a while in the spring, hustle the harvest and fall work, and in the winter either loiter around or buy a ticket for Ontario. No other province could stand the yearly drain Manitoba does, and there is no reason why farmers cannot keep lots of stock and have work to employ help all the winter. Replying to questions by J. A. McGill as to how 25 or 30 cattle could be kept on a quarter section, Mr. Irwin said he would fence the farm into fields and grow cultivated grasses. Ontario farmers often kept more cattle than that on 100 acres, besides other stock, and surely we could do as much on 160. Were grasses seeded with the first crop on summer fallow the catch would likely be good. He condemned the twice plowing of summer fallow. It should be plowed as soon after the seeding season as possible, as it can then be plowed deeply.

G. S. McGregor considered hiring men by the year was the best method—his own experience showing this. Thos. Drayson and D. J. McMillan were not entirely of Messrs. Irwin and Benson's views as to mixed farming.

THE EXPORT CATTLE TRADE.

George Hamilton then read a paper on the above topic, which is substantially as follows:—

The cattle industry is a very important one. Farmers should give a great deal of attention to stock. The best live weights for beef cattle were from 1,200 to 1,500 pounds, fat and well finished. When we consider the extent of their journey to Liverpool, we can understand that they will need to be in good condition before starting. They have 1,600 miles of railway to traverse, and about 3,000 miles of ocean. If they are not fat when shipped they will not look very marketable on landing. The last year was a remarkable one in the cattle export business. The number shipped from Western Canada was 45,000. This was due principally to the fact of the dryness of the season. On the great western ranges cattle always fattened better in a dry year. The grass reached a state of maturity, which in a wet year it could not attain. The same was also true in Manitoba. Everything in the cattle line was fat this past year. Many people are curious to know why Americans get the best results in the English market. It is a fact that American beef brings two cents a pound more than Canadian. This is due to the fact that corn fed beef is better than grass fed beef. Canadian shippers have also a great disadvantage in freight rates. Other rates have been reduced but the rates on carloads of cattle are still maintained at the old exorbitant figures. To those farmers who want to grow stock for this trade, I would say, keep good bulls. This will improve your breed of cattle. It costs as much to feed a poor one as a good one. Good cattle are easily sold. It is fast coming to the point when only good ones will be taken. Five years ago anything that looked like a cow could be sold. Now the stockmen want the best. The ranchers out west are doing well. Manitoba farmers sold 28,000 stockers last year; 25,000 went west and 3,000 across the border. The American trade from now on will decrease. Heretofore prices have been governed by Americans. I do not expect that stockers will hold up in price. I would like to see farmers do more feeding. Instead of selling one and two-year-old stockers, it would be better to keep them if they were provided with warm shelter. If good shelter be not available, by all means dispose of them. Farmers should keep more stock of all kinds. Horses, cattle, pigs, poultry and a quantity of No. 1 hard make a combination that is hard to beat.

PROVINCIAL HAIL INSURANCE.

A discussion on the question of Provincial Hail Insurance followed the reading of Mr. Hamilton's paper. It was moved by Geo. Hamilton, seconded by J. H. Irwin, and carried, that the secretary mention in the announcement of the next meeting, that a resolution will be brought forward asking the government to take up the matter of hail insurance.

MANITOU.

The Manitou Agricultural Society held a meeting on Jan 12th for the purpose of considering the advisability of holding a spring stallion show; and also to consider the wish of some members of the society to offer a bonus for the services of a first-class Clydesdale stallion for the coming season. The president in speaking of the necessity of a spring stallion show, in order to promote the breeding of first-class horses, took occasion to refer to the fact that at the Winnipeg fairs it is seldom that a prize horse or colt can be found from the Manitou district. There is certainly a reason for this, and he thought that the interests of the farmer demand enquiry in that direction. His personal opinion was that the time had arrived for the society to take action in this matter. The first step in the promotion of good horse breeding is to get good sires, and they can be best induced to come to this district by holding a spring show. John S. Robson thought that the farmers should get the best horses possible for breeding purposes. He was in favor of a spring show. Several other members spoke briefly on the subject, and it was agreed to hold a spring stallion show.

After considerable discussion, it was agreed that no special effort should be made to introduce a light-legged horse, such horses being more a luxury than a necessity. Finally it was agreed that the directors of the Agricultural Society be requested to offer a prize of \$100 for the best Clyde stallion exhibited at the spring stallion show in Manitou; that the stallion taking such prize shall have at least three stands in the electoral division of Manitou, and shall charge a fee for the service of such horse, not to exceed \$12, and that the members of the Agricultural Society shall have the prior right to the services of such stallion over others not members of the said society. In moving that the Clydesdale should be the breed to be bonus, Dr. Young said he favored a clean boned Clydesdale, weighing about 1,800 pounds. He had no use for the Standard bred horse. The Hackney was a fairly successful animal, but not up to the Clydesdale, which formed a basis for a good farm horse, and would go as far in a day as a farmer wanted to go.

CARTWRIGHT.

At the last meeting of the Agricultural Society, held on Jan. 12th, S. J. Thompson, V.S., lectured on The Diseases of Farm Animals, and Capt. Leese on Stock Feeding and the Care of Live Stock. Great interest in these meetings is reported, and when Messrs. Bedford and Rooney, who are billed for Feb. 7th, come along, they are sure of a large and appreciative audience.

EMERSON.

At its last meeting on Jan. 12th, the Agricultural Society resolved to go heartily into institute work and a committee was appointed to handle that department of its work. A paper was read by J. Sullivan on "Poultry for Profit." He thinks nothing pays so well as poultry; the first essential is a warm house; he is in favor of Plymouth Rocks, after trying twelve different breeds; they are good layers and good for table use. The winter is the time to get eggs for profit. If a hen lays 100 eggs she is worth \$2.50. One bushel of grain will feed a hen a year. A house for 100 hens should be 40 feet long, and one man can look after 1,000 hens. Hens will not lay unless in perfect health.

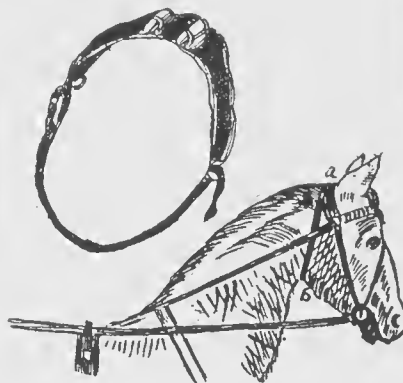
After this paper had been discussed, a visitor from Dakota invited the members to be present at a meeting in Pembina, where President Worst, of the Agricultural College, Fargo, and other members of the college staff, were to hold a two days' institute. The next meeting of the Emerson society will be held on Feb. 2nd, when field potatoes and seed oats will be discussed.

BIRD'S HILL.

The Bird's Hill Farmers' Institute held a meeting on Jan. 12th, which was fairly well attended. The subjects discussed were:—"Purchasing Seed Grain," "Green Feed Corn," "Brome Grass," "Best Oats for this Section," "The Killing of Wild Oats and Noxious Weeds," "The Advisability of Putting Gravel on Country Roads." The next meeting will be held on Saturday, Jan. 26th, at 8 o'clock, when addresses are expected from speakers from a distance.

A Contrivance for Checking Runaways.

A single rein is provided with buckle attachments, as shown separately in the drawing. This is buckled under the crown piece of the bridle at A, by the two buckles. The rein is drawn under the throat of the horse at B,



and through a drop-ring on the left side, passing through a terret on the saddle to the driver. Should a horse bolt, the rein is tightly pulled, thus crossing the horse's throat, and he is compelled to stop, inasmuch as his breathing is impeded.—Exchange.

The English Miller has the following to say about a well-known Manitoban: "We had recently the great pleasure of making the acquaintance of W. F. Thompson, the managing director of the W. W. Ogilvie Co., of Winnipeg and elsewhere, who is over here on a visit with his wife and daughter. He has had a good look round, and is immensely pleased with all he has seen in the Old Country. He left England for Paris on Tuesday, January 2nd. The Ogilvie Milling Company operate mills capable of producing 13,000 barrels per day, or nearly 400 sacks per hour, hence it will be understood that his position is one of great responsibility. This is Mr. Thompson's first visit to the Mother Country, and he has led us to understand that he had seen and learnt much which he would never forget. He has succeeded in negotiating with Messrs. Arthur May & Co., of South Africa, to act as the firm's agents in that country. Mr. Thompson also informed us that not more than 10 per cent. of the fine spring wheat land in Canada was yet cultivated, and that the capabilities of the land there for producing magnificent wheat were almost unlimited. We bade farewell to Mr. Thompson with many regrets that we had not seen more of him, for a more thoroughly genial, gentlemanly, yet withal astute and able type of Colonial Britisher we have seldom had as a guest to these shores."

A Successful Manitoban.

The Farmer is pleased to congratulate G. E. Atkinson, of Portage la Prairie, on his appointment as head of the Department of Birds, Mammals, Fishes and Reptiles at the Pan-American Exposition at Buffalo. Mr. Atkinson is known to the readers of The Farmer as a contributor of several excellent articles. He sent a splendid exhibit of his skill as a taxidermist to Paris, and the quality of his work won him the proud position of having the full charge of the exhibit at the great Buffalo show this year. He will be personally responsible for procuring and arranging in place the entire exhibit of North America, and will have charge of the exhibit from South America as well. The exhibit is limited to those forms which the Indians used as food, and of these forms nearly 90 per cent. can be obtained in Manitoba and the Territories. We understand it is Mr. Atkinson's intention to use Canadian forms wherever it is possible to do so. This appointment should mean a good advertising of Canadian fauna. We understand Mr. Atkinson has been appointed provincial naturalist.

Banner Oat Tests in Scotland.

Canadians will be pleased to know that the Banner oat, so well known throughout the west, has stood at the top in a test made at the West of Scotland Agricultural College by Professor Wright. He selected eight varieties of more or less well-known British oats; two other varieties were furnished by Messrs. Gartons, the well-known seed specialists; and two varieties were obtained from Dr. Saunders, director of the Dominion Experimental Farms. The British oats were Providence, Potato, Sandy, Hamilton, Longhoughton, Newmarket, Tam Finlay, and Black Tartarian. Messrs. Gartons' oats were their Tartar King and Pioneer, and Dr. Saunders's were Banner and Improved Ligowo. In order of "total value of crop" the leaders were:—1, Banner; 2, Longhoughton. Potato, and Hamilton; 3, Black Tartarian; and 4, Pioneer. These experiments have more than the ordinary value, in that the experiments were carried out on seventeen different farms.

Steers are inclined to increase in size more than heifers while fattening.

There is nothing more disheartening than feeding up stock that have got into too low condition.

The 1901 prize list for the Royal Show shows some cutting down in several classes.

Ignatius Donnelly died recently at Minneapolis. He was famous as a strong advocate of the theory that Francis Bacon wrote all of Shakespeare's plays.

An interesting story comes from Colorado, where Col. Roosevelt is hunting, about his being compelled to take to a tree by grey timber wolves. After four hours' sojourn in the tree at night he was rescued by friends.

"The very best" is what we are after. This is what the Winnipeg Business College claims to be giving in the way of preparing young men and women for a life of usefulness. They offer the choice of three courses—business, shorthand and telegraphs. The attendance at this school has grown so that a new branch has been opened in the north end of the city, near the C. P. R. depot. To those unable to take advantage of the regular course, the offer of tuition by mail is certainly of great value.

Majuba Day.—The days between the 18th and 20th February, 1900, will be memorable in the history of the South African war. The part taken by the Canadian troops on that day when the "lion of the north"—General Cronje—was forced to surrender, will be spoken of as a work worthy of any regiment. The position they occupied is clearly depicted in the picture which The Weekly Globe is giving free to its yearly subscribers. It is certainly worthy of a place in every Canadian home.

A Century's Progress in Canadian Agriculture.

By Tru O'Cragh.

The century just closing contains in itself practically all that has to do with agriculture in Canada. True, settlements had been made years before the beginning of the century—in the fertile valleys of Prince Edward Island, in the land of Evangeline, in the primeval forests of New Brunswick, along the shores of the St. Lawrence and the Great Lakes, and even in our prairie province along the Red River—but agriculture as we now know it did not exist. The first work of the settlers, of the U. E. Loyalists who came from the U. S. in 1784, and of the extensive immigration after the war of 1812-15, of the Irish settlers who came in after the Irish troubles of 1798, and of the great influx of English, Scotch and Irish settlers that came pouring in from 1818 to 1834—years of industrial depression in the British Isles—and of the many thousands that followed later, was the clearing up of the land. The farms were well called "clearings," as the trees had to be felled and an open place made for the log cabin and barn, and for the small field in which to grow potatoes, wheat, and oats to keep the settler alive. All honor to the cobblers, carpenters, weavers, mill hands, etc., whose first experience in farming was with the giants of the forest, and whose first exports were oak and pine deals and wood and potatoes.

As more land came under cultivation the area devoted to grain was increased and a period of grain growing followed. This in turn gave place to a more advanced period, in which stock raising took a prominent part, and by a still later period, the last 25 or 30 years of the century, in which dairying has been a leading feature. These four periods—the early clearing, grain growing, stock raising and dairying—are fairly typical of the steps every settlement in the older provinces has passed through. Settlers in Manitoba and the Northwest not having the forest to clear off, have made more progress in a few years than our forefathers did in a generation. Many are now in the grain growing period, while a few are into stock raising. All will follow in due time both into the stock raising and the more intensive dairying periods. Our western farmers are bound to follow these periods, but they will be much shortened to what they were in the days of our forefathers.

LABOR SAVING MACHINERY.

There is nothing which strikes one more quickly when reviewing the progress of agriculture during the century than the advancement that has been made in labor saving machinery on the farm, and it has had a very practical bearing on the rapid settlement of our prairies. At the beginning of the century the farmer cut his grain with a sickle, or scythe, or possibly with a cradle; and every available hand on the farm, the women included, was required in the field to cut, bind and stook the grain. The work was exhausting and from a third to one-half an acre a day was the average of a day's work with the sickle. Now the farmer sits on his self-binder and cuts, binds and gathers into bunches ready for stooking from 12 to 15 acres a day. In some of the Western States the header, cuts threshes and sacks the grain. The first header was brought out by Cyrus McCormick in 1831, and a better one in 1834, but it was not until 1845 that a really practical machine was introduced. Since then the growth and development of all kinds of farm implements have been truly wonderful. In the beginning of the century the farmer sowed his seed by hand and covered it with a bundle of brush drawn over the ground, and later came the three-cornered harrow. Now he sows all his grain with a drill and also plants his potatoes and corn by machinery. In the early days our forefathers threshed their grain with the flail or tramped it out with horses during the winter and marketed it before spring; now our big grain separators, driven and hauled by traction engines, not only thresh the grain, but clean and bag it as

well, and it is hauled to the elevator at once. In the early days the plow was a cumbersome wooden affair faced with iron, and drawn by oxen, as it was a sin to set horses at that kind of work. Now we have our fine steel mould board riding and walking plows. In fact, nearly all work on the farm has had machinery adapted to it. We have all kinds of harrows, cultivators, grain crushers, straw cutters, hay forks and loaders, slings, rack lifters for the barn, manure spreaders, etc., etc. As an evidence of the saving in human labor effected by machinery, it is only necessary to notice the reduction in the amount of labor required to grow a bushel of wheat. In 1830, about three hours of human labor were required for every bushel; in 1900 this had been reduced to ten minutes; and the cost from 17¢. to 3½¢.

STOCK RAISING.

We have all heard the old folks tell of the time when the first calf on the farm was a seven days' wonder and the visitor was soon greeted with "Have you seen our calf?" The progress has been truly wonderful, as well as the changes in the manner of housing, breeding, feeding and marketing. Instead of the steers having to be fed until four years old, they are turned off soon after they are two. The majority of our farmers have some knowledge of the principles of breeding and are working for what the butchers set up as an ideal animal for the end of all stock—the block. Many of our forefathers knew little about feeding cattle, some of them were practical feeders, but to their knowledge we can now add what we know about the processes of digestion and assimilation that takes place in the animal's digestive organs. The chemist and experimenter have found out the value of all our foods in the animal economy for the production of work, fat, heat, energy, milk, growth, etc. With this knowledge of our foods we can combine them to produce the best and most economical results in feeding.

It is not long since the local butcher was the only purchaser of fat stock, or the farmer slaughtered an animal and sold it among his neighbors. How the markets have changed! Just this year Canada sent over 92,000 head of live cattle to England, besides sheep, bacon and hams. Large abattoirs, or packing houses, are being established at leading points throughout the country for killing, curing and packing our live stock, and the new century will likely see a great advance in this line of work.

Then we must not forget to mention the enviable reputation Canadian breeders of pure bred stock have gained for their skill in breeding. This has been the work of years of steady improvement, and now we have the satisfaction of seeing our American cousins coming yearly in increasing numbers to purchase our stock at high prices. The work was begun in a small way, but it has steadily grown until now there are excellent studs, herds and flocks, from ocean to ocean. Nearly all known breeds of horses, cattle, sheep and swine are represented, and many of them have excellent registers. The breeders are united in associations in nearly every province. So great has the live stock industry grown that a Live Stock Commissioner has been appointed for the Dominion, to assist its further development by seeking new markets, encouraging interprovincial trade in pure bred stock, and by disseminating and inculcating the best information on the care, breeding and feeding of stock. At the beginning of the century the buffalo had possession of our prairies; their place is now taken by large herds of cattle.

DAIRYING.

In the early days the keeping of cows was incidental to the needs of the family. They were poorly housed and fed. It was a common occurrence to have to "lift" them in the spring. They calved in the spring, milked during the summer and went dry in early fall. The butter was made in a primitive way, and there was small sale for it. Gradually these things have changed. The application of mechanics to dairy utensils has brought about a revolution. First came improvements in the churns, and then in the devices for skimming—deep setting cans, creamers, and lastly the

modern cream separator. The appliances for making cheese have also been greatly improved. The close of the century sees a great advance along every line of work in dairying except the milking of the cows. It is still done by hand, though milking machines are in use which are said to work very satisfactorily, but they have not come into general use, and it remains for the new century to solve this problem.

The great advancement of dairying during the century has been due to the knowledge which science has given us of the composition of milk, and the action of bacteria in causing changes in it. Every step in butter and cheese making is now understood and largely under control. This increase in our knowledge of milk and its products has led to the adoption of many handy tests and appliances. Chief among these is the Babcock test, invented by Dr. S. M. Babcock, of Wisconsin Experiment Station, and which stands out prominently as one of the greatest aids in dairying in the closing years of the century.

SCIENTIFIC INVESTIGATIONS.

The art of agriculture is as old as man, but the science of agriculture is only in its infancy, although the early work in the science of agriculture was not done in Canada, yet it has had its influence on Canadian agriculture, and a review of our progress would be incomplete without at least a short reference to it.

At the beginning of the century agricultural science was a sealed book. To Sir Humphrey Davy is due the credit for the first effort to reduce agricultural knowledge to a science. He published a series of lectures in 1813, under the title of "Elements of Agricultural Chemistry." His work in England, and that of De Saussure, Thaer, Sprengel and Baussingault on the continent paved the way for the excellent work of Liebig, whose publications appeared in 1840 and 1842. His work was really the first of a practical nature and opened the way for the investigations that have since been carried on in finding out the composition of the soil and the plant and their relations to one another, as well as the relation of animals to the soil and plant.

The first club or society of farmers for the study of the soil and its crops was formed in 1840 in Mockern, Germany. They soon had a chemist at work trying to find the best special fertilizer, and from this beginning have grown the numerous experiment and research stations now found in all civilized countries. Space will not permit us to trace the growth of these investigation stations in Germany, France, the British Isles and the United States. In Canada the earliest special effort in this direction was the establishment of the Ontario Agricultural College at Guelph in 1874. The Agricultural and Arts Association had been at work many years before that date, but its efforts had been mainly directed to holding an annual fair. Lectures on agriculture were given in connection with Toronto University, but the establishing of a college and experiment farm were the first real steps in advancement. How it has grown since then! The college has grown and developed until it far exceeds the expectations of its promoters, as outgrowths from it there are three dairy schools in the province, ten fruit experiment stations, and an extensive system of experimental work carried on throughout the province. Then came our Dominion experimental farms, the central one at Ottawa, with four others throughout the Dominion. The great value that the farms at Brandon and Indian Head have been to this western country is well understood by western farmers, and equally as well appreciated. Prince Edward Island has had a stock farm for the breeding and distribution of pure bred stock for many years. Nova Scotia has her schools of agriculture, horticulture and dairying. New Brunswick has a dairy school, and Quebec schools of agriculture and dairying. In our own province we have a dairy school and hope soon to have an agricultural college as well.

Farmers' institute meetings are now held in every province, spreading the experience of the best farmers and their methods.

Botanists are searching the world for

plants in order to get the most prolific, hardy and suitable ones for each section of our country. New varieties are constantly being imported and tried, and cross-breeding and other methods adopted to secure the best. Nor are the best means of destroying troublesome weeds neglected.

Entomologists are studying the thousand and one insect pests and plant diseases which attack our grains and fruits. The services the entomologist has rendered the farmer are inestimable.

The biologist is studying the microscopic forms of life that affect the plant food of the soil, that bring about changes in stored foods, that underlie the changes in milk, butter and cheese, and that cause many of the diseases that attack our live stock. Agriculture owes Pasteur alone a greater debt than she can ever repay. Bacteriology is a young science, but its value has been most emphatically demonstrated.

Space will only allow me to refer to the influence the excellent transportation facilities that Canada now enjoys has had upon her agricultural development. The two go hand in hand. The rapid and successful settlement of our prairies has been possible only through our extensive railway system. Then I wish to refer to the special privileges accorded to pure bred stock by the railway companies and the influence this is bound to have in improving our live stock. What a change in the transportation facilities we now possess as compared with those of our forefathers! And with electric roads we are likely to see a great improvement in the near future.

This paper is already too long, but the subject is such a big one and full of so much that is of importance to the farmer that volumes could be written. I will conclude with a reference to three of the most hopeful signs of the closing years:

1. The greater interest taken by our governments in scientific agricultural investigation.

2. The number of young men who are entering upon this field of study—a field rich in opportunities for original research, the solution of which will be of untold value to the agriculturist.

3. The growing demand for accurate and up-to-date knowledge in every branch of farming, of which the rapidly widening circulation of your own Nor-West Farmer is only one manifestation. The reports and bulletins of the experimental farms are eagerly read, experts on agricultural topics are always welcomed at institute meetings and subjects discussed with increasing profit to all.

When we look around us and see the forces at work for the upbuilding of agriculture we cannot help feeling that good seed is being sown. There is springing into life a new agriculture whose art is based on a knowledge of the scientific truths which underlie all farm operations; its growth will be rapid and the new century will see a harvest the extent of which we little dream.

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Change for a Quarter.

By Mary A. P. Stansbury.

It was a blustering December morning. The air was full of fine flakes of snow driven before a keen northeast wind and cutting the exposed face and hands like bits of steel. Not even the near approach of the festival of gladness and good-will—for Christmas was but two days off—sufficed to temper the elements to irritable sensibilities. Some malicious sprite seemed abroad upon the blast, watching to whirl an unguarded hat into the gutter or, shyly lifting a loosened corner of coat or wrap, to send an icy chill to the very vitals of the luckless passer.

Car No. 45 was but partially occupied, and as the driver stopped upon a crossing at the signal of two ladies standing there, each male passenger shrank a little deeper into his great-coat collar, congratulating himself that, for the present, there were still seats to spare. A moment later, there was not one of them all who would not gladly have seized upon any rational pretext to do honor to the young girl who was quietly taking a place beside her companion.

"She was so beautiful," said an elderly gentleman afterward, "that I felt as if I ought to take off my hat to her."
"I wonder how it feels to look like that," murmured the pale-faced seamstress opposite behind her veil.

Yet that which lent the touch of perfection to such beauty was that the girl herself evidently did not feel it at all, or, if she were conscious of it, accepted it as something quite as impersonal as air or sunshine.

As the speed of the car again slackened, a little newsboy swung himself up by the ice-crusted rail. He was a tiny fellow, not more than eight years old. His jacket and trousers were threadbare, and his face blue and pinched with cold. He made the tour of the car slowly, repeating his appeal of "Mornin' papers! *Globe* and *erald*!" But in vain!—another of his profession had been before him, and no outstretched hand of a purchaser broke the indifferent ranks.

In the farthest corner sat the beautiful young lady. The poor boy was turning back, when she touched him lightly upon the ragged sleeve.

"You may give me one," said she.

The boy looked at her, and a wondering expression parted his lips. He stood an instant motionless.

"The *Herald*, please."

He started as if from a dream, and quickly drew the paper from his package. She took it from him, giving in return a bright silver quarter of a dollar. The little salesman was fumbling in his pocket, when she said gently:

"Never mind the change."

"But it's only two cents, miss."

"Yes, I know. You may keep the rest."

"Helen, your soft-hearted creature!" interrupted her companion. "It is easy to see that you are from the country. Don't waste your sympathy on newsboys—they are little rascals!"

The tone was not loud, yet the words reached the child's ears, and checked the "Thank you, miss!" upon his lips.

The lovely face flushed with pain, as the girl leaned forward impulsively and laid her hand again upon the little tattered arm.

"I am sure this one is not," said she. "May you have a happy Christmas, my boy!"

Then she smiled full upon him—a wonderful, dazzling smile.

"Tell you what," said the conductor, relating the incident to his wife that evening. "It was such a warmin' sort of a smile as sent the mercury in that car up twenty degrees at a jump! I'd been shiverin' myself, but I come near turnin' down my coat-collar!"

The tall young man in a fur ulster caught no more than the reflection of the smile, yet that was enough to make him wish for a moment to change places with the little newsboy, if by so doing he could have had it all for himself. It was a novel experience, for he was used to be much sought after and to be the recipient of smiles so many and various, that a single one, more or less, had mattered to him but

little. He suddenly recalled, with a flash of amusement, the "William Henry Letters" of his boyhood's delight, with the instruction of the grandmother as to "a way of looking without seeming to look—a sidewise way!" Partially screened behind his newspaper, he proceeded to put this wise suggestion into practice. The name of his lovely neighbor—Helen—and that she had but lately come to the city, he already knew—thanks to the careless words which he had overheard. The leathern roll upon her lap decided him that she must be a student of music. He wondered whether the shapely fingers, which she had bared when opening her purse for the newsboy's coin, were in training, or the low, clear voice which had seemed in sooth melodious enough without the aid of a master. Her left hand was crossed above her right, and he detected in himself an inconsequent sense of satisfaction at the discovery that she wore no rings. "Am I so extremely young as to go daft over a pretty girl in a street car?" thought he, and returned resolutely to his journal. Yet, as the conductor's bell rang sharply, and the two ladies alighted, his eyes involuntarily wandered from the news column to catch a last glimpse of the slender, swaying figure crowned with the gray-plumed hat, as it disappeared amid the hurrying crowd.

To Sandy, the newsboy, the silver quarter seemed to have been the omen of better fortune. He had seldom known a more prosperous day. All his papers sold, he went home early—if, indeed the comfortable tenement could be called a home, which he shared with "Mother Meg," who was not his mother. Nobody seemed to understand by what title Mother Meg asserted her claim upon Sandy and his earnings; but since it was something which no one cared to dispute, it readily passed unquestioned. Certain it was that she exacted from him a strict account of sales and profits, and the amount expended each morning for stock in trade was rigidly compared with the nightly receipts.

Poor Sandy had been confronted all day by the perplexing question how to conceal his possession of the quarter and still account for the two cents necessary to complete his balance. But once more his fortunate star was in the ascendant. As he was making his way along, having resolved to say that he had lost the money, and take the beating sure to be the penalty for such carelessness, a stout gentleman carrying a portmanteau came puffing down the street. Sandy sprang to meet him, pulling at his ragged cap.

"Carry ycr baggage, sir?"

The stout gentleman glowered at him for an instant.

"None of your tricks, then!" said he. "Take it, and—d'ye see this walking-stick? If you keep more than a step in front of me, I'll knock you down!"

Sandy's heart beat too high to be daunted by the implied suspicion. He trudged manfully along, scarcely noticing the tug of the heavy bag upon his thin little arm—setting down his burden at length in the waiting-room of the Albany depot. The stout gentleman put his hand in his pocket and, drawing out a handful of coin, deliberately counted three copper cents into the small, brown palm. Sandy made no cavil at the pittance—for once he was rich enough to be magnanimous. Retiring to a secluded corner, he carefully pinned the quarter between the outside and lining of his jacket, and set off at a run.

In his dreams that night he spent the money twenty times over, with the smiling face of the beautiful girl beaming over every purchase, and woke with his head full of confused memories that he was forced to feel for his treasure to convince himself of its reality.

With what a proud sense of competency he hung about the shop windows gay with Christmas wares! There were so many things, any one of which he could buy if he wished. The bewildering counters, overhung by placards bearing the legend "Your choice for 25c.," were no longer part of an inaccessible palace of delight. He imagined himself saying to one of the smart shop-girls, "I'll take this here, mum!"—and flinging his money carelessly upon the counter. He saw the basket fly as if by magic along the carrying wires, and return, with his package daintily wrapped, by the same mysterious impul-

sion. He was just taking it from the girl's hand, and—

"Move on, here!" commanded a burly policeman.

And Sandy, with a start, would feel for the solid foundation of his vision, and move on light of heart.

Christmas eve drew on, however, with the treasure still unspent.

"I just can't abear to let it go," said Sandy to himself—"all along o' the way she looked when she gin it to me. I'll wait till to-morrer. I don't allow ever to see her again," he added, wistfully.

"I'll look in on Billy," thought he, as he climbed the long staircase of the building shared by Mother Meg with a score of similar tenants. "The little feller gits lonesome by hisself."

He groped along the dim passage, and knocked at the rickety door.

"Come in!" responded a child's voice.

Sandy pushed open the door. The only occupant of the room was a boy of about his own age, who rose from the cricket on which he had been sitting, and turned toward him the peculiar, introverted gaze of the blind.

"Hello, Billy!"

"O, Sandy! Is it you? I'm so glad!"

"Let's have a look at ye, kid! I thought so!—ye've been a-cryin'!" said Sandy, with decision.

"I couldn't help it. O, Sandy, its broke!"

"What's broke?"

"My mouth-organ. Seems as if I couldn't stand it!" The child's voice quivered.

"Hold yer hosses, Billy! How'm I goin' to talk with ye, if ye commence agin? Who broke it?"

"She didn't go for to do it. 'Twas mother—it slipped off the chair, an' she stepped on it afore she knew."

"Le's see it, Billy."

The blind boy produced the little battered instrument, touching it tenderly, as if it had been some beautiful, dead creature.

"Ye can't mend it, Sandy. It's smashed flat. Mother'd buy me another, but she can't. She's mostly sick nowadays, an' she's got behind with the rent. 'Twas such company for me, Sandy—ye can't think! I don't know whatever I'm goin' to do. I mos' wish I was dead!"

"Billy!—don't ye go to talk that-a-way!"

Sandy's face reddened and paled, and his voice trembled.

"Don't you fret, Sandy!" cried the blind child with swift compunction, as the tone of distress vibrated upon his sensitive ear. "Mebbe I kin git another some day. Why, ye ain't goin' already?"

"I'll have to. Mother Meg'll be wantin' me. I'll come agin to-morrer. To-morrer's Christmas, ye know, Billy."

"Yes, I know. I use ter always hang up my stockin', but I sha'n't this year."

"But ye must, Billy—that is—mebbe—" stammered Sandy. "Promise me ye'll hang it up."

"I'll do it, if ye want me to,"—wonderingly—"but 'tain't no use—mother said so."

"Good night, Billy!"

"Good night, Sandy!"

But guileful Sandy was by no means in search of Mother Meg, with her possible requisitions. Downstairs he ran, and out into the brilliant street. The keen wind searched his thin garments, and the delicious odor of a bake-shop floated out upon the frosty air; but he thought neither of cold nor hunger. On he went—past one turning, down another, up a third; then suddenly plunging down a basement stair, he opened the shop-door of old Heinrich Wildmar, the dealer in musical instruments.

The place was temporarily empty of customers, and the gray-bearded proprietor leaned over his counter in a rare good humor, since his holiday trade had largely exceeded his anticipations.

"Mein poy, wot is it dot you will haf?"

"Please, sir—it's a mouth-organ."

"Ah!—an harmonica—I see. I see! And wot for it would you wish to pay?"

Sandy opened his clenched palm, in which lay the shining quarter.

"This here's all I've got, sir. And—if ye wouldn't mind the trouble—would ye pick me out a good one—a very good one? It's for a little feller as broke his'n. He can't see, but he can play like you wouldn't believe."

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"Blind!—dot is a sad t'ing. Tell me—is de leetle poy your brudder?"

"No, sir—he's just a friend o' mine."

"And you vill buy the harmonica for him, yourself—for a present?"

"Yes, sir—for Christmas."

"An' you haf no more money at all?"

"No, sir!"—anxiously. "Ain't it enough, sir?"

"Yes, mein poy, it ees enough."

The old man busied himself with several gayly colored boxes. At length, producing a large and handsome instrument, he held it up to Sandy's admiring gaze.

"Will dot do, mein poy?"

"Do?" echoed Sandy. "Well, I—guess so! Will a quarter buy that?"

"Listen to me, mein poy. Dis harmonica cost two dollar, five and twenty—"

"Oh!" gasped Sandy, dismayed.

"Said I not, listen? Once—in de faderland—I had a leetle poy of mine own. He is gone—since many years. I half nobody any more to say, 'A happy Christmas, mein fader!' It pleases me to make a Christmas gift to de leetle blind poy—your friend. You shall gif me de quarter-dollar,—so we gif de harmonica togeder. See?"

"O, sir! I do' know wotever to say! But if ye cud see Billy when he gets it!"

"I shall see him," said the old man—and he bowed to the "street-Arab" as if he had been a courtier,—"through your eyes."

Miss La Chapelle, the French music-teacher, was carrying a basket filled with Christmas delicacies to a sick girl on the fourth floor of the tenement-house. Suddenly, from the other side of a closed door, came the sounds of so unusual a musical concert, that she involuntarily paused to listen. Some one was playing a harmonica accompaniment, marvellously soft and sweet, to a boy's voice singing—a wonderful contralto, pure and deep as a silver bell.

"Who can it be—here?" she asked herself; and as the song ceased, she tapped gently. A pale woman opened the door. Two little boys—evidently the musicians—sat side by side within.

"I beg your pardon, but I heard the music and could not pass by. Are the children yours?"

"Only this one—he is blind, you see."

A boundless pity spoke in the teacher's eyes.

"He has a gift that many clear-seeing might envv. And you, child,"—to Sandy—"has nobody told you that you have a fortune in your voice?"

The boys heard her uncomprehendingly. "Won't ye sit down, ma'am?" asked the mother, dusting a broken chair with her apron. Miss La Chappelle took the offered seat, and with a few gentle questions drew the story of the blind child.

No, he was not born blind. A fever, when he was two years old, left him so. Was there no help? Perhaps, but it would cost a great deal of money, so people said, and she had none. She hadn't been well for a long time,—some days she could not work at all. Who taught him to play? Nobody—he picked it up himself. Mrs. Maloney, on the first floor, had a melodeon, and sometimes she would let Billy go down. He could play that the same,—and Tom Wilkins's accordion, too. It seemed as if it was born in him. But where was the good? Blind people can't work, and music won't keep from starving.

Miss La Chappelle sighed. The burden of the world seemed to sink upon her heart. Then she remembered whose birthday it was, and took courage.

A few weeks later, she waited with Billy the verdict of a famous oculist.

"The child can doubtless be cured, madam, but the treatment will be tedious and expensive. The operation is a very delicate one, and there must be months in the hospital."

Miss La Chappelle was poor, with aged parents dependent upon her, but she had friends at court. More than this, she incarnated the persistence of purpose in a cause on which she had once set her heart.

That the great Mrs. Latimer's drawing-room should have opened for a *musical* in which the chief performers were to be a little blind harmonica-player and a street gamin whose voice had been exercised by crying the *Globe* and *Herald* on the crowded crossings, seemed scarcely less than a miracle. And was it not quite as strange that Herr Edelmuth should have consented to assist, and to bring with him his young violin pupil, about whom all the musical people were talking?

Mrs. Latimer's invitations were the commands of a society queen. The guests obeyed, curious and good-naturedly indulgent of the new charitable whim.

The blind child stood before the glittering assemblage unabashed; but Sandy's stout little heart quailed within him.

"I'd rather a' fit a kid twice my size," he confided to Miss La Chappelle afterward—"but kep' a-sayin' to myself, 'It's for Billy's eyes!'"

The repertoire of the small musicians seemed practically inexhaustible. Old songs, street melodies, or mission-chapel hymns—the encores were never wanting. No operatic "first night" had ever scored a more signal triumph.

A ripple of well-bred admiration stirred the room as Herr Edelmuth led out his pupil, and took his own seat at the piano. With a listening, caressing motion, she bent her chin upon her instrument, while the gas-light illuminated her perfect form and face. Sandy started erect, then sank into his place again, hot and cold with mingled embarrassment and ecstasy.

"Billy," he whispered, "it's *her*,—the lady as give me the quarter!"

The tall young man at Mrs. Latimer's right bent slightly forward, and the carved sticks of her fan, with which he had been trifling, crumbled between his fingers.

"Sorry?" said that lady. "You are not; you are positively radiant. I believe you broke it on purpose."

When the applause which followed the closing numbers had subsided, replaced by the murmurs of general conversation, the tall young man took Sandy by the hand, and made his way to where the girl violinist still stood at her master's side.

"Will you present me?" he asked Herr Edelmuth.

"Miss Vivian, I have the honor to introduce my friend, Mr. Fortescue."

The young man bowed.

"Yet we have met before—we three!" he said, in a tone so low that none but the lady caught the words. A faint flame of color burned in her cheek, and her lovely eyes, falling, met the little newsboy's enraptured gaze. Could it be that those frank eyes had also known the secret lore of the "sidewise look?"

True stories do sometimes end like fairy tales—despite the realists. So it will not be thought incredible that in due time Fortescue married his beautiful Helen; that Sandy, released from "Mother Meg," is,

under their united guardianship, on his way to grow a useful citizen; that Billy has his eyes again. And what of the newsboy's self-sacrifice, old Wildmar's Christmas memories, the tender pity which lightened Miss La Chappelle's tireless feet and opened the hearts and purses of Mrs. Latimer's fashionable guests? The sum—nay, rather the geometrical progression—was it not all "change for a quarter?"—*New England Magazine*.

German Wheat.

Germany grows so poor a quality of wheat that she is bound to import a considerable quantity of foreign wheat rich in gluten. The old native varieties appear to have "run out," giving only 10 bushels yield, as compared with 18 bushels from imported English seed. But the English varieties get very poor in gluten and very frequently the farmers must sell their wheat at a low price for export, while the millers buy foreign sorts to improve the baking quality of their flour, paying a high duty on the imported article.

The Army of Health.

The Army in the Philippines Insignificant Compared With This One.

If all the people in the United States, Canada and Great Britain who make daily use of Stuart's Dyspepsia Tablets could be assembled together it would make an army that would outnumber our army of one hundred thousand by at least five to one.

Men and women, who are broken down in health, are only a part of the thousands who use this popular preparation; the greater number are people who are in fair health but who know that the way to keep well is to keep the digestion perfect, and use Stuart's Dyspepsia Tablets as regularly as meal time comes to insure good digestion and proper assimilation of food.

Prevention is always better than cure, and disease can find no foothold if the digestion is kept in good working order by the daily use of Stuart's Dyspepsia Tablets.

Mr. Thomas Seale, Mayfield, California, says: "Have used and recommended Stuart's Tablets because there is nothing like them to keep the stomach right."

Miss Lelia Dively, 4627 Plummer St., Pittsburg, Pa., writes: "I wish everyone to know how grateful I am for Stuart's Dyspepsia Tablets. I suffered for a long time and did not know what ailed me. I lost flesh right along until one day I noticed an advertisement of these tablets and immediately bought a 50-cent box at the drug store. I am only on the second box and am gaining in flesh and color. I have at last found something that has reached my ailment."

From Mrs. Del. Eldred Sun, Prairie, Wis.: "I was taken dizzy very suddenly during the hot weather of the past summer. After ten days of constant dizziness I went to our local physician, who said my liver was torpid and I had overheated my blood; he doctored me for two weeks without much improvement. I finally thought of Stuart's Dyspepsia Tablets (which I had used long before for various bad feelings) and the first three tablets helped me. They are easily the best all-round family medicine I ever used."

The army of people who take Stuart's Tablets are mostly people in fairly good health, and who keep well by taking them regularly after meals. They contain no opiates, cocaine or any cathartic or injurious drugs, simply the natural peptones and digestives which every weak stomach lacks.

Stuart's Dyspepsia Tablets are sold by druggists everywhere in the United States, Canada and Great Britain.

When writing advertisers, mention this paper.

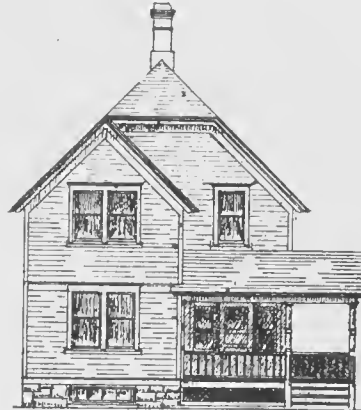
Country Homes.

By W. A. Elliott, Brandon Man.

Plans and specifications of published designs will be furnished by Mr. Elliott for three-fourths of one per cent. of the cost.

PLANNING A HOUSE.

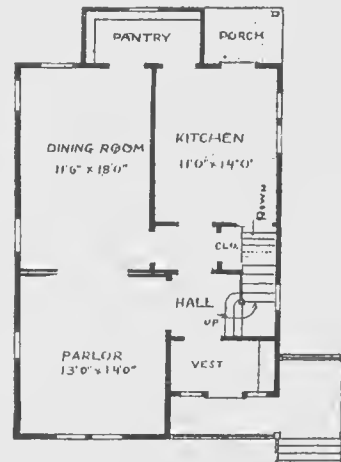
This is one of the most important features in house building. We meet so many people, who say, "If I were



FRONT ELEVATION.

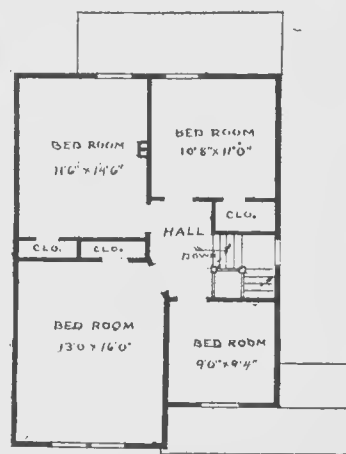
This design illustrates a 7-room house that will fill the requirements of many farmers who wish an inexpensive and well arranged home. Its many advantages can be seen by a careful study of the floor plans. Estimated cost, from \$1,000 to \$1,200.

going to build again, I would do so and so. I built my house 18x22, and when we got partitions up, we found that the hall was too narrow and our



Ground Floor.

dining room was too small," etc. We always find it so when we start planning with outside dimensions. We should first study what our house is to be, how many rooms we require, what they are to be used for and the kind of furniture they are to contain, making



First Floor.

sure to have each room large enough for what it is intended.

THE FRONT PORCH.

George F. Barber, in *Modern Dwellings*, says it should be one of the most attractive features of the house, con-

taining some novel or interesting feature that will actually suggest an invitation to enter and that will throw a sense of completeness of finish and beauty over the whole structure. Your front steps should be broad and beautiful, suggestive of the hospitality of which the owners are justly proud.

THE RECEPTION HALL.

This is one of our modern necessities in house-planning and is capable of becoming, with proper treatment, a marvel of usefulness and elegance. No room in the house should be more attractive and inviting, and no room should have more perfect accommodations for ease and comfort than this friendly and inviting apartment. It should be the key to the entire house, suggestive of beauty, cleanliness and good order throughout all other apartments. A neat stair design, a small piece of grill work, a cozy nook, or retreat, with an inviting seat, art or stained glass windows, hardwood floors, paneled wainscoting, paneled ceiling, etc., are suggestive features for the hall. Suitable woods are oak, cherry, ash or hard pine. Two kinds of wood are nice. Quartered oak is best of all woods for this room.

(To be continued.)

The Doctor's Cartridges.

The mystery in which the doings of a doctor, scientist, or inventor are clothed, to the ignorant mind, is the occasion of as many surprises as there are new things.

An elderly woman, in one of the simple homes in the Tennessee mountains, was ick. The medicine that the doctor prescribed was in the modern convenient form of capsules. The patient trusted her medical advisor, but regarded the medicine with suspicion. She had heard about the terrible dynamite cartridges. Some time after she had taken the capsules her daughter inquired how she felt.

"Mighty po'ly," was the reply.

"Don't you want something to eat?"

"No."

Soon, however, the mother sat up in her rocking-chair. Thinking the attention would be gratefully received, the daughter filled her pipe with the fragrant "baccy," and taking a live coal from the hearth, carried both to her mother.

A scream of fear came from the old woman. "Take it away, child! Don't you come near me with that fire while I've got those cartridges in me!"

How to Transfer Newspaper Pictures.

The liquid to be used is made by dissolving 1½ drachms common yellow soap in one pint of hot water, adding, when nearly cold, 3¼ fluid ounces spirits turpentine, and shaking thoroughly together. This fluid is applied liberally to the surface of the printed matter with a soft brush or sponge (being careful not to smear the ink, which soon becomes softened), and allowed to soak for a few minutes; then well damp the plain paper on which the transfer is to be made, place it upon the engraving and subject the whole to moderate pressure for about one minute. On separating them a reversed transfer will be found on the paper.—National Educator.

At news of a betrothal, friends hasten to extend invitations for various festivities to the happy pair, and the families interested exchange hospitalities.

Many persons prefer not to announce their engagement until there is a prospect of the marriage taking place within a year. An engaged girl should not only accept from her lover such gifts as might be returned uninjured should the engagement be broken.



Forestry Meetings.

Mr. Stewart, Dominion Chief Inspector of Timber and Forestry, since holding his meeting at Winnipeg has gone west to the Territories, but is expected back in a fortnight, and will, assisted by A. P. Stevenson, Nelson, hold meetings at leading centres in Manitoba as follows:—

Virden—Tuesday, Feb. 5, 2 p. m.
Brandon—Wednesday, Feb. 6, 2 p. m.
Portage la Prairie—Thursday, Feb. 7, 2 p. m.
Neepawa—Friday, Feb. 8, 2 p. m.
Emerson—Monday, Feb. 11, 2 p. m.
Morris—Tuesday, Feb. 12, 2 p. m.
Crystal City—Wednesday, Feb. 13, 2.30 p. m.
Boissevain—Thursday, Feb. 14, 7 p. m.
Deloraine—Friday, Feb. 15, 2 p. m.
Melita—Saturday, Feb. 16, 7 p. m.
Hartney—Monday, Feb. 18, 2 p. m.

Western Forestry Association.

A meeting was held in the City Hall, Winnipeg, on Jan. 18, with a view to creating a greater interest in the preservation of existing forests and encouraging the planting of shelter groves in open prairie districts. Major Mulvey was called to the chair. The first speaker was A. P. Stevenson, Nelson. Mr. Stevenson has had longer experience in tree planting than any other man in the province, but that experience is so far discounted by the fact that Nelson is one of the best sheltered spots in the province and trees that do well with him will prove less satisfactory, or even be absolute failures when put out on more exposed situations. But, as he pointed out, the failures resulting from ignorance or lack of skill and care are far more numerous than those due to climate alone. In the open country what is wanted for the present is not forests but groves and shelter belts to protect and ornament our gardens and homes. For such situations we should always begin with native trees, of which the ash-leaved maple is most readily available. The cottonwood, if imported from North Dakota points in the form of seedlings, will do well. Its tap root strikes down in search of moisture. Owing to the want of deep roots, cuttings from the same variety are liable to be dried out, and rust is a form of disease which has developed in a very alarming way. Cottonwoods from farther south than Dakota are not hardy and should never be bought. Besides the ash-leaved maple white ash and elm are very desirable, and all three are best and most easily propagated from seed, which should be sown in drills, two inches deep, preferably in May, and transplanted two years after. The seeds of elm ripen in June and should be sown at once. Of trees not native, European poplars and willows are very suitable here. Evergreens are the most desirable of all for shelter, because most in evidence in winter. Native spruce is the hardiest. Scotch pine, balsam and arbor vitae are hardy with him, but not strong enough for general use. Evergreens for planting should not be more than two years old, 18 to 24 inches high, and twice transplanted. May, Mr. Stevenson has found, just when the buds are formed, is the best season to plant, though June has been recommended. The great point is to save the roots from sun and wind when being moved. Soak the land well when planting so as to puddle the roots, and tramp the earth well down. Then mulch with rotted chips. In extreme drouth it is well to remove the mulch, cultivate and then cover up again. Potatoes are the best prepara-

tory crop where trees are to be planted. To prevent evaporation from the soil is the key to success. For small fruits and garden crops, shelter belts are almost indispensable.

WHAT THE GOVERNMENT INTEND TO DO.

E. Stewart, Chief Inspector of Timber and Forestry for the Dominion, outlined the object of the department at Ottawa and gave the reasons why forestry should have the intelligent interest of all settlers. The leading object of his department is the preservation of existing forests. When the other provinces came into confederation they retained control of their timber lands, but British Columbia handed over to the Dominion a forty-mile belt along the Canadian Pacific railroad. Eastern people have the idea that the Northwest is all prairie, but we in the west know that only about one-eighth of the whole area is prairie. From Alaska to Hudson's Bay there is an immense area under timber. The recently developed demand for spruce as material for paper makes that timber more valuable than ever before. In the past forest fires are estimated to have destroyed ten times more than has been cut for use. Northern timber being largely resinous, is very susceptible to fire, and once started those fires sometimes ruin great areas of forest. In Quebec and Ontario a good deal has been done for forest preservation, and W. C. Edwards says that in Quebec they have scarcely had one great forest fire. The people are being educated to the importance of doing all they can to avert such fires.

In Ontario forest rangers have been appointed to assist in this work of education, and the same methods of instruction should be introduced here. A very important timber reserve is that of the Riding Mountain, where the government has reserved 1,000,000 acres. Such forest areas protect the sources of nearly all our principal water courses. If the 45 townships now reserved were stripped of their timber the snows that are now gradually melted and trickle down into the earth to supply perennial springs would rush off in spring floods and be wasted. The Assiniboine would be nearly dry every summer, and a flood for a short time in spring. The Shell, Bird Tail and Little Saskatchewan rivers, as well as a dozen streams on the north side of the mountain, would be similarly affected. The Turtle Mountain and Moose Mountain reserves are other examples, and their protection is of untold importance to Manitoba.

In the foothills of the Rocky Mountains there is another reserve. These reserves, he thought, should be set apart by Act of Parliament, instead of by order-in-council, as at present. The timber at the foothills is exceedingly valuable for the purpose of holding back the snow and water. A little irrigation is being done in southwestern Alberta, which is a dry country, but rich, and will become the garden of the Northwest. Irrigation without proper protection of the sources of water supply would be impracticable.

TREE PLANTING ON THE PLAINS.

Besides taking measures for the conservation of existing forest areas, the aim of the government is to encourage and instruct settlers in the work of tree planting so as to avert as much as possible the mistakes and disappointments of unskilled workers. The idea is not only to provide new settlers with suitable trees, but to appoint men of sufficient skill and judgment to go out and advise them in the layout of the timber they wished to plant. Such people plant now as well as they know how, but too frequently failure is the result, and the climate or something else is blamed. Or, when planted, the requisite care and cultivation are not provided in after years, and all the labor is lost. If that course is followed, the government would pay the instructors; all the farmers would be asked would be to do the work as the supervisor would advise. His present visit here was to put before the people the views of his superiors and enlist the support of a regularly constituted organization to encourage and help to popularize the work.



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ARE especially selected to suit this northern climate, and are all the best kinds adopted for culture here. We advertise nothing in our catalogue that has not been thoroughly tested and reported good by the Experimental Farm. You cannot afford to use seeds that will not mature. With proper attention FLEMING'S SEEDS will always give the best satisfaction.

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and are the best that grow. Planting time is not far off. Planning time is here. Decide now what you want to plant when the frost leaves. Send at once for

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and a Handsome Prize for every correct answer. This is a Puzzle Picture, with a boy concealed. If your eyes are wide open, and you examine the picture closely, perhaps you may be able to find him. When you have done so, take a pen and mark the outlines of his face and body, then clip it out and return to us with your name and address written very plainly. In your letter enclose six one-cent stamps for postage and packing expenses. The first person sending in a correct answer will receive a Beautifully Engraved, Gold-Plated Hunting Case Watch, and all others will receive Handsome Prizes. ART SUPPLY CO., Box 1102, Toronto.



Your Home

Is not complete unless you have Trees and Shrubs. The soil will be so moist this spring, it will be a good season to plant. We have the best you can get, let us know what you require and we will do our best for you. Write for list of Trees and Seedlings, Shrubs, Fruits, Plants, etc., to

H. L. PATMORE, BRANDON NURSERY Man.

SURVIVAL OF THE FITTEST.

Currie's Pumps

Established in 1873.

RUPERT ST. EAST, WINNIPEG.
Opposite Brunswick Hotel.

FAILURES IN TREE PLANTING.

S. A. Bedford spoke of the difficulties of tree planting. He could point to 2,000 stumps in the city of Brandon alone. Why was that the case? Why so many more failures in Brandon than in Portage? His answer was that (1) Too tender varieties had been selected, and some that would grow fairly well at Winnipeg or Portage failed when carried to higher altitudes. (2) Others were hardy, if grown from native seed, but tender if from imported seed or stock. At Brandon farm seedling elms from Oak Lake showed 95 per cent. alive. From Ottawa 95 per cent. died. (3) The higher the altitude the more difficult it is to grow a good many sorts. Oaks are scraggy at Brandon, but do all right in the Red River Valley. (4) Hot winds are more destructive as you go west, and have been known to fairly shrivel up the green leaves. (5) Limited rainfall is another cause of failure. If there were more rain tree growing would go on in spite of the severity of the climate.

SUITABLE TREES TO PLANT.

To the native maple, white ash and elm, as suitable trees to grow here, he would like to add the native birch, a beautiful tree and easily transplanted. The green ash is a slow grower, and so is the cedar. At Brandon they introduce 20 to 40 new varieties of trees and shrubs each year and find 5 or 6 of them hardy. They have now between 200 and 300 that can be called fairly hardy. He would discourage the planting of cottonwoods on all high lands, though they might be all right for the Red River Valley. Rust has made great havoc among previously healthy looking trees. Boreolensis is a very desirable variety of Russian poplar. He would fight drouth by continuous cultivation for the first five years, and be careful to keep down all weeds and grass.

Hedges—For the ordinary farm use he strongly recommended ash-leaved maple, set 3 feet apart in the row, but it must be well cut back so as to make it spread well at the ground. This makes a good combined fence and snow-break on the outside of a shelter belt. For finer work in gardens, the caragana, or Siberian pea, is excellent. The native snowberry is small, easily grown, and makes a very neat edging. All plants used as hedging should be severely cut back the first few years. Such a hedge makes a better snow-break than a belt of trees.

PLANTING MAPLE SEED.

As regards seeding the maple, there are about 14,000 seeds in a pound, but most people only get a fraction of that number from their most careful sowing. The seed is kept over in a too dry place and generally put in soil not moist enough to ensure prompt germination. If this is missed the seeds lie dormant for a year or perish altogether. Such seeds ought to be soaked some days before going into the ground, and at least 50 per cent. will germinate. He has this year half a ton of this seed, of which the most part will be given away. It is collected yearly at Portage la Prairie. Elms are most easily got by collecting them as small plants from among the undergrowth surrounding the parent tree. In one drive from Brandon to Gretna along with Prof. Saunders, they had found plants distributed from Brandon at almost every farm on the road.

PLANTING ON BUSINESS METHODS.

John Caldwell, Virden, gave a short address on the business aspect of tree planting. Mr. Caldwell started in the nursery business several years ago, and now plants over 50,000 trees each season, mainly for farmers living within reach of Virden. His plan, reached af-

ter years of miscellaneous work in the same field, is to set out on properly prepared ground seedling maples, elms or cuttings a year old from Russian poplars, for which he charges at the rate of \$15 for 1,000 or \$25 for 2,000, which he guarantees to live, or replace what are lost. In the too short planting season of early May he employs four men and four boys, and with this help will drive out and plant 5,000 trees in one day, tenting, if need be, on the ground where they work. In good years very few plants are lost, but last summer was a most disastrous one for the guarantee business. No end of plants were dried out and lost. Mr. Caldwell has no faith in larger trees, unless for special cases to which extra care can be given in the shape of watering and mulching. He would not take even two-year-old trees, as they require much more work with less satisfactory results, and, as shelter belts for the ordinary farm, trees put in on his methods are becoming quite popular where the results of his last few years' work are known.

MR. CALDWELL'S PLAN.

It may be worth while to give here an example of the working out of his method. The arrangement, of course, would vary with the tastes of the customers.

As a snow-break a low growing thick-set in the form of a hedge, on the outside of such a shelter belt, is best, as it will get to be a good fence in a few years, if properly cultivated and cut back. Some people prefer a double row. Either way two feet apart in the row is quite close enough to plant such a hedge. This would take 150 plants of maple for each 100 yards. A hundred and fifty more such plants would be enough to plant three rows a proper distance apart. In this way Mr. Caldwell could contract to furnish and plant 1,000 yards of such a shelter belt for about \$30, the farmer preparing the land himself and a reasonable amount of subsequent cultivation to keep down weeds till the trees themselves are masters of the situation. Once this system becomes better known it is sure to find general acceptance. Mr. Patmore, at Brandon, has done a good deal in the same line, and of course both men are ready to supply plants and suitable pointers to farmers at a distance who have time to do their own planting.

At the close the Winnipeg Forestry Association was formed in affiliation with the Canadian Forestry Association, and the following officers elected: Hon. president, Lieut.-Gov. McMillan; president, Rev. Dr. Bryce; vice-president, A. P. Stevenson, of Nelson; secretary-treasurer, G. H. Greig; directors, D. W. Buchanan, C. J. Thompson, Virden; F. Schultz, Baldu; E. F. Stephenson, Wm. Martin, R. Barclay and R. T. Riley, Winnipeg.

A Horticultural Discovery.

Tom Hood, the noted English humorist, thus describes a great hit made by an amateur gardener:—"My wif had a tom cat that dyd. Being tortureshell and a great favorit we had him berried in the guardian and for the sake of enrichment of sile I had the carckiss laid under the roots of a guzberry bush, the frute being up till then of the smooth kind. But the next seasons frute after the cat was berried the guzberries were all hairy and more remarkabul the catpillars of the same bush were all of the same hairy description."

J. J. Shaw, Oak Lake, Man., Jan. 9, 1901: "I think The Nor'-West Farmer the best paper a farmer can take. I would not be without it."

Arthur R. Newsham, Iunifall, Jan. 3, 1901: "Enclosed you will find one dollar for renewal to your paper. I think that it should find its way into the home of every Western farmer, its information and reports being most valuable."

D. C. McMillan, Griswold, Man., Jan. 9, 1901:—"I think The Nor'-West Farmer is the best paper for the farm that I have ever read. It keeps improving all the time. We have only taken it for one year, but we cannot do without it now."



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San Jose Scale.

A government proclamation has recently been issued in which exemption from the San Jose Scale Act is permitted to any trees, shrubs, plants, vines, grafts, cuttings or buds, commonly called nursery stock from any country or state to which "The San Jose Scale Act" applies; and that all importations thereof must be entered at the customs ports only of St. John, N.B.; St. John's, Que.; Niagara Falls and Windsor, Ont., and Winnipeg, Manitoba, between the following dates in each year: 15th of March to 15th of May in the spring, and 7th of October to 7th of December, in the autumn; and at Vancouver, British Columbia, during the winter months only from 15th of October to 15th of March, at which ports they will be thoroughly fumigated with hydrocyanic acid gas by a competent government official in accordance with the most approved methods.

All shipments made in accordance with the above will be entirely at the risk of the shippers or consignees, the government assuming no risk whatever.

Packages must be addressed so as to enter Canada at one of the above named ports of entry, and the route by which they will be shipped must be clearly stated upon each package.

As it is well known that well-matured and thoroughly dormant nursery stock may be safely treated, but that there is danger of serious injury to the trees if fumigated in the autumn before the buds are thoroughly dormant, or in the spring after the buds have begun to unfold, therefore, all stock, which, when received is immature or too far advanced for safe treatment, will be refused entry and held at the risk of the shipper.

Western Rye and Brome Grass Seed FOR SALE

Also young **Shorthorn Bulls**
All young stock. Will be sold cheap for cash.
Write **J. D. CASWELL,**
Rosthern, Sask.

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W. G. Fonseca, Esq.,
Dear Sir,—I am glad to be able to state that the All-Wool Mica Roofing which you have supplied this Company has been entirely satisfactory, and I consider it superior to any r. of this class on the market. (Signed) J. WOODMAN, Engineer, W. D. 768

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Throughout Canada is at the head of all other Grain Cleaners in use in the Dominion, and is fast accomplishing the same result in the U. S.

If you want a MILL, be sure and get the one that has gained a reputation by general use, which insures you against making a mistake.

A full line of repairs always on hand at Brandon.

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For further information, write—

Wm. Atwell, Western Manager, Brandon, Man.

E. W. Grove

This signature is on every box of the genuine
Laxative Bromo-Quinine Tablets
the remedy that cures a cold in one day



The Canadians.

By W. L. Leavens, Foxwarren, Man.

When the mother country called them
They volunteered to go,
To fight for England's glory
And help defeat the foe.

From Halifax they did embark
And landed at Cape Town,
Then they proceeded north in time
To help hunt Cronje down.

"Until you're fired on 'advance.'"
These were the orders sent.
And so, like cattle, on all fours,
Across the plains they went.

Old Cronje knew that he was caught,
A white flag then was raised,
The British gave a mighty cheer,
And Canada was praised.

Fight after fight they bravely fought,
The mighty ranks grew small;
But they were there in time to see
Pretoria's downfall.

But very soon they were allowed
To launch out on the sea,
And start for England; on their way
Her Majesty to see.

They safely got to England's shores,
They saw their aged Queen;
Her eyes were filled with tears to see
How loyal they had been.

From Liverpool they then set sail
Across the mighty main,
And safely got to Canada
By Christmas time again.

Home-Made Methods of Curing Colds.

For Threatened Influenza—Put twenty drops spirits of camphor with twenty teaspoons water. Take one teaspoon every half hour. This is excellent in incipient gripe.

For Threatened Colds in Head. — Wring a cloth from ice-cold water, lay over the bridge of nose and eyes, and dry cloths over it. As the wet cloth heats, repeat experiment. If tried on the chest, as the "cold pack" may be for cold contracted and settled there, have a number of dry cloths with oil-cloth over all.

For Threatened Pneumonia—Put the patient to bed with hot water bottles applied to the soles of the feet, palms of the hands, armpits and under the knees. Of course no one with so serious an illness as this should go long without medical advice, if it can be obtained. Till it comes this is a wise way to proceed.

For Colds on the Chest.—Rub the lungs, back and front, with camphor oil—camphor gum dissolved in olive oil till the liquid will take up no more. The skin absorbs this readily. Apply profusely and cover with cotton batting.

For Hoarseness.—Take frequent sips of glycerine and lemon juice mixed in equal parts, and shaken until they are incorporated.

For Neuralgia—Place a wet cloth over a hot water bottle, a soapstone heated, or a hot brick, and apply the steam to the afflicted part.

For Bronchial Trouble.—Put ten teaspoons spirits of camphor to forty times their bulk in boiling water. Place in a pitcher and incline the open mouth over the top, so that the steam enters the throat freely. Care must be taken in the perspiration which ensues not to contract further cold; but this is a royal remedy for heavy chest colds.

BOLE'S COUGH CURE CURES COUGHS.

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A Good Little Manitoba Boy Who Made It His Business in Life Not to Allow People to Impose on Each Other.

By C. B. Loomis.

Melchisedek Jones could not bear to see people imposed upon. He was only eleven years old when he took his putty blower, his bean shooter and his sling and started out to walk from Carberry



"Just help to push this to the brow of the hill."

to Oak Lake in order to right all wrongs that he might come across. Whenever he saw a man who looked cruel or mean or selfish, he peppered him with his putty blower. And if he still looked mean or selfish or cruel, then he shot beans at him, and if he continued to look selfish or cruel or mean, he let him have a stone out of a sling, and that generally cured him. For a sling in the hands of a small boy is a hammer and no mistake.

He had gotten almost to Brandon, and the road was strewn with cruel, mean and selfish people whom he had bowled over temporarily, when he came to a long hill. At the top of the hill stood what looked like an automobile and by its side were two men, one of whom seemed to be the owner of the vehicle. The owner was trying to sell it to the other man, who had a kind of down-trodden, under-dog look about him that made Melchisedek feel for him.

"Now, Mr. Sanford," said the owner of the automobile, "I owe you money and I know it, but I have no money to pay you, while I have this automobile. Now, I only owe you one hundred dollars, and this machine is easily worth a thousand, but you see it makes me nervous to ride out in a wagon that hasn't any horses to stop it when it gets going too fast, and so I'll let you have it for the debt."

"But," said Mr. Sanford, "I never go out riding because I hate to, and I need the cash very badly. The automobile will surely get out of order and I can't afford to have it fixed, so I'll be worse off than I was before."

"Nonsense," said the man, with a selfish gleam in his eye that made Melchisedek get out his putty blower, "you can ride in this down to Rapid City and sell it to any of the rich people who live there for at least five hundred dollars."

"Why don't you do it, then?" asked Mr. Sanford, quite pertinently.

"Because," said the man, "I promised my children that I would go hazel-nutting with them this afternoon, and better a walk with them than all the money in the world."

Now, while this made the innocent Mr. Sanford feel that Mr. Simpkins was a nice man, it made Melchisedek think that Mr. Simpkins had no children at all and doubtful that the carriage was an automobile. But as yet he could do nothing.

"Give me a receipt for one hundred dollars and take the automobile," said Mr. Simpkins. "Come, I will ride to the foot of this hill just to show you

how to work it, and then," said he looking at his watch, "I must hurry off to my darlings, my dear little boys, for the pets are hungry for hazel nuts."

Now, if Mr. Sanford hadn't been a goose, he would have known that Mr. Simpkins was up to something, because men don't talk that way about their children, unless they are mollies—at least not in public. But Mr. Sanford was a great innocent, so he wrote a receipt for a hundred dollars and gave it to the man, and then they both stepped into the carriage. Mr. Simpkins pulled a lever and the thing didn't go.

All this time Melchisedek had stood out of the way and the man had not noticed him at all. Now Mr. Simpkins looked out and pretended to see a stone in front of one of the wheels. "Ah," said he, "I see there's a stone in the way. I'll push the automobile for a few feet. It sticks sometimes when I haven't used it much. Here, boy," seeing Melchisedek, "just help me push this to the brow of the hill."

Melchisedek pushed with a good will, and then as Mr. Simpkins jumped inside he hung on behind. Mr. Simpkins pulled the lever to the lowest notch and the carriage went down the steep hill in fine style.

"I did you a wrong," said Mr. Sanford, "I thought you were going to cheat me, but this is delightful. I know a man in Rapid City who will buy this as soon as he sees it."

Melchisedek, sitting behind on the place where they put trunks, laughed to himself, put his putty blower into his pocket and took out his bean shooter. Then he shook his head, and putting away the bean shooter he took out his sling and fitted a fat hickory nut into it. He saw through Mr. Simpkins' wicked scheme, as I suppose you do also, my boy.

They all went whizzing down the hill and along the level for a few rods, and then Mr. Simpkins said: "I must stop



Melchisedek let him go.

now and go to my darlings. Away, away for the nuts, the toothsome hazel nuts."

He applied the brake and the "automobile" came to a stop.

"How can I ever thank you?" said Mr. Sanford. "You must let me give you some of the money that I get for this."

But Mr. Simpkins shook his head and said: "Never, my dear friend, never."

Then he made away up the hill and for the present Melchisedek let him go. He wanted to make sure that he had imposed upon Mr. Sanford.

He hopped down and went around to the door of the carriage.

"I'm very much afraid, Mr. Sanford," said he, "that Mr. Simpkins has gotten the best of you. I don't think this is an automobile at all. It is just a shaftless carriage with faked up lever and brake."

"Nonsense, my little fellow," said Mr. Sanford, with some zest. "Where are the horses that drew it the last half mile?"

This would have been a poser for some boys, but Melchisedek said: "Any wagon will roll down hill if you give it a push and steer it straight. Does a sled need a horse when you're coasting? Do they have horses on tobaggans? Try to go up the hill after Mr.

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Simpkins, who is by now hazel-nutting with his darlings and his darlings, and you'll find that you need a horse."

Mr. Sanford turned pale. If this was a carriage merely and not an automobile, it was not worth thirty dollars.

He pulled the lever down to the lowest notch, but the thing never stirred.

"Maybe there's a stone under the wheel. See, my son."

But the road was as smooth as the marble table that grandma uses to roll her pastry on.

"I thought as much," said Melchisedek. "Do you know anything about Mr. Simpkins?"

"I only know that he owes me a hundred dollars that I lent him last month. You see, he sold me an organ that a child could play, but I never thought until after I'd bought it that I have no children and no grown-up person seems to be able to make it go."

"Not even down hill, eh?" said Melchisedek. "But, why did you lend him the hundred dollars?"

"Because he seemed so sorry that my organ wouldn't go," said Mr. Sanford.

"You ought to have a nurse, my poor man," said Melchisedek. "This Mr. Simpkins has no children, you may depend upon it. But he has one hundred dollars of your money and you have an old cab that's pretty near falling to pieces. Now, we must overtake Mr. Simpkins and make him give back your money."

Just then, by great good luck, an automobile, which sort of vehicle is getting very common around Brandon, came toward them.

Melchisedek held up his hand and the driver stopped.

"Take us up the hill," said the boy.

He pushed Mr. Sanford into the automobile. "Run at your top limit, driver. We want to catch a tall man with flowing red whiskers like banners and a selfish look on his face."



"Maybe there's a stone under the wheel."

The automobile man started with such a jerk that Mr. Sanford toppled over backward and sat down hard.

"Here, stop," said the boy, "here's a policeman. We want him to go along, too."

The policeman sat down behind, and then up the hill they went lickity cut, and when they reached the top they saw Mr. Simpkins sitting on a rail fence, smoking a cigar and smiling in a very selfish way. His long whiskers were streaming in the autumn breezes, and he looked like the wicked man that he was.

"Hold up," said Melchisedek to the driver. Then he fitted a delicate piece of putty into his putty blower and blew it sharply at Mr. Simpkins, who gave a start and looked up.

As soon as he saw Melchisedek, he started to run, but the boy shot a bean at him, and it gave his cheek such a smart twinge that he turned around angrily, and said: "What are you doing, young man?"

"Having fun with you. Where are your dear darlings and where are the hazel nuts? Aren't you afraid that your pretty dears are worried about you?"

Then Mr. Simpkins saw Mr. Sanford, and he knew what the matter was.

"It's lucky for you that I brought a policeman along," said Melchisedek, "for if I had relied on this sling you might regret having taken such a mean advantage of this poor gentleman, Mr. Sanford."



He was smoking a cigar.

Then the policeman came around and said: "I arrest you for imposing on this poor gentleman, and I'll take you before the judge at once." For Melchisedek had told him what had happened on the way up.

So Mr. Simpkins, shivering to the tips of his whiskers, got into the automobile and the policeman got in after him, and Mr. Sanford and Melchisedek and the motor man were very much crowded, but they didn't mind in the least because the wicked man was going to get his deserts.

And when they came to the judge, Melchisedek told him the whole story just as I have told it to you, and the judge said: "My boy, what do you think would be the worst punishment I could give a man like this?"

Melchisedek thought a minute and then he said:

"Most mighty judge, I think that for a man like Mr. Simpkins the greatest punishment you could give him would be to make him take a party of children out hazel-nutting every afternoon for thirty days."

Mr. Simpkins shuddered and tried to jump out of the window and escape his fate, but two officers held him, and the judge said, in a voice of thunder: "Melchisedek, you have well said. Each day, for thirty days, Mr. Simpkins shall take out a crowd of innocent children and help them gather hazel nuts. And he shall begin this afternoon."

And they led him out to gather a band of little ones.

But I think it was pretty hard on those Brandon children.

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Proverbs About Many Women.

Respect always a silent woman; great is the wisdom of the woman that holdeth her tongue.

A vain woman is to be feared, for she will sacrifice all for her pride.

Trust not a vain woman, for she is first in her own eye.

A haughty woman stumbles, for she cannot see what may be in her way.

Trust not the woman that thinketh more of herself than another; mercy will not dwell in her heart.

The gods honor her that thinketh long before opening her lips. Pearls come from her mouth.

A woman that is not loved is a kite from which the string has been taken; she drives with every wind and cometh to naught by a long fall.

A woman and a child are alike; each needs a strong, uplifting hand.

A woman that respects herself is more beautiful than a single star; more beautiful than many stars at night.

Woman is the ease for that which pains the father; she is balm for his troubles.

A woman who mistakes her place can never return to where she first was; the path has been covered up from her eyes.

A woman desirous of being seen by

men is not trustworthy; fear the glance from her eye.

Give heed to her to whom children have come; she walks in the sacred ways and lacks not love.

When first a woman loves she fears; she fears not that to which she has become accustomed.

A mother not spoken well of by her children is an enemy of the State; she should not live within the kingdom's wall.

A woman without children has not yet the most precious of her jewels.

Give heed to the voice of an old woman; sorrow has given her wisdom.

A beautiful woman knows not her charms; therefore is she beautiful, more so than the colors of the sea.

Speak not ill of any woman; if a woman be not righteous, what she is speaks for itself.

Like sheep that are leaderless are many women come together for much talk.

Hot milk is a cure for many ills. When you come in tired from an afternoon's outing, try how a cup of it will refresh you. As a pick-me-up it is unrivalled, for it not only stimulates but nourishes. The only point to be remembered is to take it in sips, and not in one draught. In sips it is easily assimilated, but taken at a draught it may easily cause a bad attack of indigestion. For the complexion, milk is excellent. If the face is wrinkled, rough or sallow, bathe it with hot milk. Treat the skin to hot milk every night, and the improvement in whiteness and texture will soon be apparent.

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The holes showing along the top of the wall are for ventilation.

Read what Archie Crozier says about Thorold Cement.

ESTATE OF JOHN BATTLE.

Beachburg, Ont., Aug. 14, 1900.

GENTLEMEN: It is with much pleasure that I testify to the good quality of your Thorold Cement for building purposes. I have just completed a Basement Wall, Cistern and Floor throughout the entire building. Size of wall is 45 x 120 ft., 8 ft. above floor, and a 2-ft. footing. 12-in wall above footing. I also put in door-sills and window-sills of cement. I used 280 bbls. of cement in the whole job. I consider it a cheaper and better job than either brick or stone, and furthermore, I have saved by building with cement, 2,900 cubic ft of space over and above what I would have had if built with stone. Therefore I give credit to the Cement for \$160 on space. The work was under the direction of your man, Mr. Geo. W. Reid, who understands his work well. I do highly recommend your Thorold Cement to any person intending to build any kind of buildings, for snugness, durability and extra space.

I mail you a photo. of our basement wall, and am sure you will be pleased with its appearance, for every person that sees it, either from Western Canada or any other place, says they never saw its equal for appearance, or from an architectural point of view. ARCHIE CROZIER, Breeder of Shorthorn Cattle, Yorkshire and Berkshire Pigs, and Leicester Sheep.

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PREMIUM SUPPLY CO., Box 20 Toronto.

The American Bison.

The buffalo or American bison is practically extinct. Thirty years ago they roamed by millions over the western plains, northward in the spring and southward in the fall, where had been their natural grazing grounds for centuries. No man has been more familiar with these innocent monarchs of the plains than C. J. (Buffalo) Jones, who has seen them vanish from the earth, almost like a mist before a summer sun. In the New York Herald he gives the following account of his experiences with them and the success of his efforts to establish a new breed, which he calls "catalo," by crossing the buffalo bulls with Galloway and Polled Angus cows: "About thirty years ago I moved to the frontier. I was poor, and it became necessary for me to join the skin-hunters. I was a good shot and soon became an expert. I hired myself out to a company of farmers to shoot down buffalo at fifty cents each. I was a good hand at this bloody trade and my bosses made money following me up, skinning the animals that I had shot and marketing their hides at \$2 each. I realized that the work was cruel and wicked, and many a time, as I stood and looked down into the dying eyes of the great monarchs of the plains and listened to their groans, I felt like swearing off the whole business. Next morning I would be awakened by the 'crack, crack' of the rifles all over the plain, and, concluding that the work of extermination would not be delayed over fifteen minutes in all by my small efforts, I would again join the chase.

"Even while we were killing thousands of the noble animals each year, I made up my mind that I would one day atone for the cursedness by rescuing a few of the bison, herding them and protecting them as best I might be able. This I have done. Out on the Western plains the cow-men and the ranchers will tell you how much of an effort has been necessary in order that a few of the remaining buffalo might survive up to the present.

"The bison is an animal perfectly trained to take every advantage of his environments. His instinct surpasses that of the shrewdest ranchman — because for ages he maintained himself where the cattle of the ranchmen are now dying. There is no waste grass left on the four-foot swath which the animal cuts in feeding. The herd rise at dawn and commence to graze. When filled they start for the trail, led usually by an old cow, who gives the signal for starting by sounding a grunt not unlike that of a hog, only much louder. The remainder of the herd drop in behind, following exactly in her footprints until they reach the path which leads them to their drinking-place. This path never exceeds twelve inches in width. It is the same path along which the ancestors of these buffalo have travelled for countless ages.

"When the pool, lake or stream is reached, the buffalo step in, fill themselves, and immediately return to the banks instead of lingering in the water and polluting it, as domestic cattle do. Thus, by keeping to one track, they have saved the grass over which the cattle straggle to water, and they have kept the water pure and fresh. After resting an hour or so they wend their way over a well-defined trail for miles and miles, without cutting a blade of the grass which is so necessary for their subsistence. If the man who 'causes two blades of grass to grow where only one has grown' is a benefactor of the race, how much more is the buffalo a benefactor, who preserves thousands of blades that other animals ruthlessly destroy?

"The buffalo never yields to disease. He is clean in his domestic habits and in consequence always drinks pure water, eats clean, fresh grass, does not hestear himself with filth, and consequently never suffers from any of the skin diseases common to domestic or range cattle. His thick underfur and the 'pantalets' which cover his legs make him unaware of the existence of flies in summer and allow him to fatten where domestic cat-

tle grow thin and die on account of these pests. When winter comes he adds an additional robe of fur to his robe of fat, and turning his head to the storm eats quietly along to the front in the face of the fiercest blizzard that ever blew.

"There are many small traits of the buffalo that are lacking in cattle. The buffalo cow never allows her calf to be destroyed by the coyote. The buffalo never mure in swamps or pools, as so many cattle do. When they find that they are becoming stuck they throw themselves on their sides and swim or paddle through the mud as would a hog. In spring time they curry themselves by rolling in wallows, made in the hard, dry clay, thus removing their winter coats and loosening up their skins, so as to take on flesh. They always lie with their backs up hill so as to rise early, and always have guards out day and night to warn the herd of approaching danger. They always face a storm, and never 'drift,' as do cattle. They lie down with their heads to the fiercest storm, throwing their heads around on their sides and sleeping contentedly, while the great mass of fur on their high humps shields the more exposed parts of their bodies from the winds.

"What is true of the buffalo is also true of the 'catalo,' a cross which I originated first in Kansas, and afterwards continued in Texas. The catalo is a cross between the buffalo and the domestic cow, and in all essentials it takes its instinct from the stronger blood — that of the buffalo. In my travels in the Arctic regions, I became convinced that millions of meat-bearing animals could be maintained there if nature's laws were followed. We cannot expect to cultivate cattle or buffalo on the luxuriant moss of the far North, where the reindeer and musk-ox thrive. Neither can we expect to make a complete success with cattle on the buffalo's natural pasturage.

The new race of cattle—the catalos—which I have produced by crossing the buffalo with the Galloway and Polled Angus cattle—are as well adapted to the short-grass country as the buffalo, and they combine with the best natural characteristics of the buffalo the peculiar advantages of cattle for human food. The catalo has the great size and weight of the buffalo. It breeds as fast and is as healthy. Its flesh is as juicy, compact and sweet as that of our best cattle. For shelter it requires only the handsome black beaver hide, which is a cross between the strong, heavy coat of the buffalo and the softer hide of its cow mother.

Dress Notes.

Gold will be the great feature in every department of woman's dress in the spring of 1901, and not improbably throughout the whole year. Next season will be a gold season, in a far more comprehensive sense than last spring was a khaki season.

Gold sequined robes are taking the place of the black and steel sewn gowns, to which we have been so long accustomed. They are mounted over two underskirts, one of white satin and the other of chiffon to give a misty, filmy effect. Many dressmakers are using cloth of gold as a foundation, under robes of exquisite real lace, the faint sheen of the gold under the filmy fabric giving a most fairy-like effect.

To clean a felt hat use spirits of ammonia, which should be applied with a hard brush.

A mixture of equal parts of flour and salt well heated in the oven cleans furs admirably if well rubbed in. The furs must then be shaken, hung over a line, and gently beaten to free from all particles.

Geo. R. Parkin, Upper Canada College, Toronto, Ont.:—"I have glanced with much interest at The Nor'-West Farmer. I can see that you make it a journal of very broad interest. It seems very remarkable to find a journal of this kind published in a country, which little more than a quarter of a century ago was comparatively uninhabited. But the world moves rapidly now."

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FOR COUGHING. — Severe paroxysms of coughing may be relieved by taking a teaspoonful of glycerine in a little cream.

EARACHE. — This affliction yields to the application of equal parts laudanum and tincture of arnica on a bit of cotton or wool.

TOOTHACHE.—Even the most troublesome tooth may have the pain almost instantly stopped by the use of a little of the common compound of benzoin, sold everywhere in the drug stores. Put a few drops on cotton and place it in or around the tooth.

BRUISES. — Bread soaked in vinegar and applied is excellent for a bruise, and cold turpentine affords relief. Children frequently tumble about when beginning to walk and knock their heads against something hard. A big lump often appears. A piece of raw beef laid on at once will soon cause this to lessen in size, and vaseline or butter should be applied afterward to prevent discoloration.

HEADACHE.—When one goes home at night after a fatiguing day nothing is more restful than bathing the head and back of the neck with a towel wrung out of water as hot as can be borne. It soothes the nerves and rests the body and brain. The same treatment relieves a nervous headache as nothing else does. When one is overheated and there is a rush of blood to the head, a hot towel applied to the face and head is a great relief.

COUGH MIXTURE.—Half a pound of honey, one gill of vinegar, two pennyworth of ipecacuanha wine. Mix all thoroughly and bottle. Dose for children, one teaspoonful; for adults, one pennyworth of laudanum may be added to the above mixture. Another simple remedy for children is the following:—Cut a good-sized onion (English) into

thin round slices, put into a deep saucer, and cover well with moist sugar. Let it stand for a few hours, strain, and it is ready for use.

If You Would Be Popular With Others.

Contribute of your best to the pleasure of others. Study the character of each, and sympathize with all in troubles or in joys, however small.

Be gentle in speech. Never retort with an angry word, remembering that the second word makes the quarrel.

Govern yourself, guard your temper, avoid moods and pets and sulkiness.

Be unselfish, deny yourself and prefer others, readily pardon any seeming lack of attention.

Beware of the scandal-monger, and shut your ears to what ought not to be repeated.

Cultivate cheerfulness and amiability. A smiling face chases away gloom. Say pleasant and kindly things when you have the opportunity.

Be not intolerant, agree to differ in opinion, and refuse to turn loud in discussion.

Remember that your best friend is your mother, and have nothing to do with those who think otherwise.

Do not expect too much, but forbear and forgive. Do not charge a bad motive when a good one is conceivable.

Do not monopolize conversation or attention, and do not talk too much of your own affairs. There is a limit to people's interest in your concerns.

If silk handkerchiefs and ties are washed in warm water, to which a tablespoonful of methylated spirit has been added, they will look equal to new when ironed while damp.

W. H. Stonehouse, Manda, Man., Jan. 10, 1901:—"I would not be without The Nor'-West Farmer for twice its cost."

The Sorrel Span.

"I declare, Lon, that horse would make a first-rate match for yours; wouldn't it?" Mr. Henderson, the village storekeeper, stepped out upon the platform of his store and laid a friendly hand on the shoulder of his young assistant, Alonzo Sawyer.

"Lon," as he was universally called, was a great lover of horses—his father and grandfather had been so before

down from the platform and walked round the sorrel, eyeing him critically.

Meanwhile the hotel keeper came out, in leisurely fashion, wiping his hands on his shirt sleeves.

"Want to put up?" he asked the stranger.

"That depends. How much farther is it to Danville?"

"Ten and a half miles."

"Is it? Then I'd better stop here over night, I guess. Well, how is it,

cribbing. But having that habit, which I suppose is incurable, he is worth only a comparatively small sum. I wouldn't think of selling him if he weren't a cribber, that's sure. But I want a perfectly sound horse, and if you are willing to take this one, knowing his fault, and give me eighty-five dollars for him, it's a trade. What d'ye say?"

Lon flushed and paled. A strange prickling sensation ran over his whole body, and his brain seemed whirling like a toy wind-mill. He knew that by a simple operation, which any ordinary veterinarian could perform—an operation as familiar as A, B, C to himself and to his father and grandfather before him—the most obstinately cribbing horse could be cured of his fault and made perfectly sound. He knew that if Mr. Hackett's horse could be so treated, he would be as sound as his own, and worth every cent of the two hundred and fifty dollars which he had paid for his own. Here was a dazzling chance to take advantage of another's ignorance and get just the horse he wanted for the merest song.

Lon started up in great agitation and walked to the window. Through the dusk he could see the spire of the village church, pure white against the darkening sky and the first twinkling stars. Only a year ago, in that same little church, with a group of his fellows, he had pledged himself to the Master's service. Alas! that his soul should so soon be shaken to its foundations by the most servile and meanest of temptations. In an instant he whirled about and came back to Mr. Hackett.

"Mr. Hackett," he cried, "I want you to know that I can cure your horse of cribbing, in twenty minutes, so that he will never do it again. The only reason why he gnaws his manger, or any wood that he can get at, is because his teeth are too long. They force his jaws apart and make him ache. He gnaws to try to wear them down, and, of course, the gnawing and pulling make him swallow wind, and, in time, he bloats and gets out of condition. That is all that ails any cribbing horse. Now, I can take a little veterinary saw and cut your horse's teeth to the right length, and he will be cured—I know it. I was tempted to keep this knowledge back, and so cheat you and get your horse for a song. But, thank God! I've been kept from doing such a wrong. Now, you say you'd like to keep your horse, if only he were sound. I can make him sound, if you'll stop over a day. If I don't succeed, or if I injure

sorrel horse seemed to understand what was being done for him, too, for he kept perfectly still during the operation. After two days' test, during which the horse did no more cribbing, Mr. Hackett walked into the store and laid one hundred and sixty-five dollars in bills on the counter before Lon. "That's for the operation," he said.

"But I never charge more than ten dollars," protested Lon.

"Well, young man," replied Mr. Hackett, "it's my right, I suppose, to pay what I please, and I please to pay one hundred and sixty-five dollars. Now, you can either keep the money, or put eighty-five dollars with it and buy my horse. These are the only two alternatives; understand that."

This explains how Alonzo Sawyer happens to be driving the finest span of sorrels in Leicester county. Mr. Hackett has not lost track of him, either. Strictly honest business men, with large commercial interests to manage, do not discover sound integrity in a young man and then forget it. There is a well-founded rumor that Lon is going down to the city in the spring, to accept an important position in the big wholesale establishment of Hackett, Stevens & Co. —Forward.

Skimming It.

"If you're going to give a pan of milk, don't skim it first," the old grandmother used to say, meaning: If you are going to do a favor, don't spoil it by an ungracious word or manner. Haven't we noticed how much of the "skimming" goes on in ordinary family intercourse?

"Another errand? I never can go down town without half a dozen commissions!" complains Rob, when his sister asks him to bring a book from the library. He never refuses to oblige her; he does not really count it an inconvenience; he only takes the cream off his kindness.

"Those gloves ripped again!" exclaims Mary, when John wants her to take a few stitches. "It seems to me they always need mending when I am in a hurry with something else." She would be shocked at his going shabby, and distressed if anyone thought her unwilling to render such offices, but she makes it a little unpleasant to ask the favor.

The children follow the fashion. Tommy shuts the door at Bridget's request, but he grumbles at having to



Farm Home of W. M. Champion, Reabun, Man.

him—and he had a local reputation for his knowledge of horse flesh and horse nature. Some months previously Lon had bought a fine sorrel "Morgan" horse, which fully realized his ideal of equine beauty, soundness, and speed; and his great desire since then had been to find a suitable mate for his pet, so that he might hold the reins over as fine a span as ever pounded the hard slate roads of Leicester county.

Lon started, as if waking from the spell of an overpowering fascination, when Mr. Henderson touched him on the shoulder. A stranger had driven up to the porch of the hotel, which immediately adjoined the village store, and was waiting for the proprietor to come out. The stranger's horse was an exact counterpart of Lon's own—a shapely, glossy sorrel, with arching neck, small, well-set head, and the delicate, clean-cut limbs of a "speeder." No wonder the boy was fascinated. He could hardly trust his senses. It almost seemed as if his strong desire must have taken the form of a waking dream.

"Why, it seems to me you look kind of dazed!" laughed Mr. Henderson. "Come, wake up, and see if you can't buy that horse before the man drives off. If you and your sorrel both lived to be a hundred you'd never find such a match as that again."

The front platforms of the store and the hotel not only adjoined but joined—to suit the convenience of a former storekeeper who had owned and run both establishments—and Alonzo Sawyer walked rapidly along the planks and accosted the stranger. He was a straightforward boy and, as usual, he came directly to the point.

"Want to sell you horse, mister?" he asked.

The man in the carriage looked up with a friendly but somewhat incredulous smile. Lon was only seventeen and rather small for his age.

"I don't know but what I would. Do you think you could find me a buyer for him?"

"I'll buy him if he's all right," replied the boy, with a slight flash of indignation in his eye. "I've got the money if I am young, and I've got the horse that'll match yours like the other yolk in a double egg."

"Well, he isn't all right," admitted the stranger, frankly. "So I suppose that settles it. I wouldn't cheat anybody in a horse trade, least of all a boy. Is your horse all right?"

"Yes," replied Lon, rather curtly. The boy resented the stranger's implication that he was too young to protect himself in a horse trade. He jumped

young man?" he added, turning to Lon. "Find any faults?"

"Getting a trifle large in the barrel for proportion," replied the boy. "May I look in his mouth?"

"Of course."

Lon parted the lips of the sorrel, with firm, skilful hands. One glance at the teeth of the animal told him the whole story, and he stepped back with a satisfied smile.

"Well?" demanded the stranger.

"Cribber," responded Lon, briefly.

"You struck it that time!" cried the man. "I see you know a thing or two about horses. Come over to the hotel after supper. I'd like to have a talk with you."

Lon nodded and went back to the store. In the meantime the hostler came and led the sorrel horse to the barn. He was certainly a splendid specimen of horse flesh, thought Lon, and as for his single fault, why, for one who knew the real cause of cribbing, that wasn't so bad. The young horse lover chuckled to himself as he returned to his duties at the store. But suddenly the smile died from his lips and he looked sober again. He had never yet cheated in any business transaction. He had vowed in his heart that he never would. Now, he asked himself, would it be cheating to take the advantage naturally coming to him from a superior knowledge of horses? What is knowledge for, except to give us an advantage in life? A subtle temptation, truly, and yet the boy uneasily recognized that it was a temptation, a solicitation to wrong.

He kept turning the matter over in his mind, until it was time to close the store for the evening. Then, before he went to his supper, he dropped in at the hotel. The stranger was waiting for him, and they sat down in a corner of the public room to discuss the matter which was just then uppermost in the minds of both.

"My name is Hackett, John Hackett," began the stranger, "and the landlord tells me that yours is Alonzo Sawyer, Lon for short, which I prefer. Now, Lon, I don't want to make any false representations or statements, even in a horse trade. Those who know me call me a square man, and I want to live up to that reputation everywhere and under all circumstances. They tell me that you are as honest a boy as ever was made, so I hope, if we come to any kind of a business deal, it will not be a case of Greek meeting Greek. Now, Lon, you know and I know that my horse would be a valuable animal, if it weren't for that unfortunate habit of



Farm Home of Thos. Jasper, Bradwardine, Man.

him in any way, I'll buy him of you and give you a hundred dollars for him."

There was a strange, glistening light in Mr. Hackett's eyes, as he put out his large, firm hand and folded Lon's in a cordial grasp that lasted fully a minute. Then he said: "Lon, my boy, I'm glad for what you tell me about the horse, but I'm more glad for what you say about yourself. I'll stop over, as you say. Good night!"

Lon's little veterinary saw worked the cure which he claimed it would. The

leave his top. Susie goes to the door when she is sent, but she departs with a protest that "It is Tommy's turn." Thus all day long, people who love one another, and who at heart are glad to help one another, skim the sweetness from every service they render.—*Christian Look.*

R. G. Rogers, Lacombe, Alta., Jan. 15, 1901:—"The Nor-West Farmer is much appreciated by us. The Christmas number is indeed a credit to your company and city."

Some Home-Made Rugs.

Take the best parts of old and dis-used ingrain carpeting and cut into strips three inches wide; then ravel on both sides of the strips to within a few threads of the middle. Now sew the raveled strips together firmly with coarse thread, as you would carpet rags, then wind into balls, and they are ready for the weaver's loom. Have the rug woven close and firm, of the length and breadth desired. In this manner a handsome and durable rug can be made at a very small cost.

Another rug, involving more labor than the above, can be made from useless scraps of worsted goods, cut on the bias (or nearly bias), and strung on a coarse thread, or a thread of fine twine. First, cut your pieces nearly of a width, one inch and a half wide, then with a coarse needle and thread gather through the centre of each strip as you would a ruffle, then push the ruffle lightly to the end of the thread, having a strong knot tied before beginning it. Adjust your colors as you choose, but hit and miss is the usual way of arranging them. If you decide to have your rug one yard wide, make each thread that your rags are strung upon one yard in length, as each strip has to be woven in separately, and fasten the cords securely with a knot as fast as the thread is filled with rags. It will require several hundred of these strings to make a rug one and a half yards in length, but you will be repaid for your time and labor when you see a rug which for beauty and durability outvies many of the expensive ones found in our carpet stores.

A knitted rug is composed of five or six strips knitted on wooden needles from smooth and even carpet rags. Cast on eighteen stitches and knit garter stitch, which is knitting back and forth, so that there is no wrong side. Remember to slip the first stitch each time across, so as to secure a good edge. Old silk and worsted goods, after being colored with some of the cheap dyes, can be used with good success for the fancy stripes, while black or brown may be used for the outside strips with good effect. When the strips are all knitted, arrange them to suit the fancy, and sew firmly together with strong thread and trim each end with inexpensive fringe.

—Country Gentleman.

A Straight Tip.

One of those harmless, green, pure in heart Englishmen, "just ovah," stepped into MacWhittie's barber shop on the eve of the Edmonton races and asked to have his beard cut clean off. After the job was completed he asked to be allowed to gather up all the hair.

"Why certainly," said MacWhittie, staring slightly. "Want to give it away in keepsakes?"

"Oh, deah, no! I chaunced to ask a man about an hour ago for a straight tip on the races, and he said that he could give me a steer for my whiskers. I'm going into the cattle business, anyhow, you know, and—ha! ha!—this is a cheap way of procuring a steeah. I'll just take these whiskers down and get the steeah. Wonder if I couldn't get a cawf on my bloody mustawche!"

At ten o'clock that night we saw this gentleman very sloppv and wrathv at the bar of the Royal, minus his luxuriant whiskers, minus the steeah, and plus a jag of considerable size and weight. This was the first eye-tooth.—*Alberta Sun.*

The Christmas number of The Nor-West Farmer is particularly interesting because, in addition to a very large quantity of original matter relating to enterprise in the Northwest, it describes the splendid new home built for The Farmer during the past summer. This building is a solid brick structure of five stories, the floor space being equal to about one acre. It is fitted up with all the latest improvements in the printing business, and this year's beautiful Christmas number, excepting only the paper and the wire used in binding, is entirely the production of The Farmer staff and plant. The publishers promise with the next issue an increase in size.—*Toronto Globe.*

Recipes.

LUNCHEON CAKE.—Take half a pound of butter or dripping, three eggs, half a pound of brown sugar, one and a quarter pound of flour, quarter of a pound of candied peel, half a pound of sultan-as, half a pint of milk, two drachms (quarter of an ounce) of carbonate of soda, one drachm of tartaric acid. Mix the acid and soda with the flour, then rub in the butter or dripping, add the sugar, sultan-as, and candied peel, beat the eggs well, make the milk a little warm, add it to the eggs, then mix quickly with the other ingredients, put into a warm buttered tin, and into the oven as speedily as possible. The oven should be rather hot. The cake will take about an hour and a half to bake.

BREAKFAST ROLLS.—To every pound of flour allow one oz. of butter, one pint of milk, one large teaspoonful of yeast, and a little salt. Warm the butter in the milk, and add to it the yeast and salt, mixing all well together. Put the flour in a pan, stir in the other ingredients, and let the dough rise in a warm place. Knead it well, make into rolls, and after they have again risen for a few minutes, bake in a quick oven.

BREAKFAST PUFFS.—On baking day roll out the dough to about the thickness of doughnuts, cut in two-inch squares and fry like doughnuts in fresh lard. Eat with butter the same as biscuit.

MIXED SANDWICHES.—Chop fine, cold ham, tongue and chicken; to a pint of mixed meat add half a cup of melted butter, one tablespoonful of salad oil, one teaspoonful of mustard if desired, the yolk of a beaten egg, and a pinch of cayenne. Spread on thin slices of buttered bread. Ham or other meats may be used this way alone.

STEAK PUDDING.—Shred fine one pound of suet, mix into it a quart of flour, a little salt, and enough water to mix as stiff as pie crust, roll out half an inch thick. Lay pieces of beef or mutton steak with oysters and a minced onion on the paste, roll up in a cloth and boil till done. Make a thickened gravy of the liquor and pour over it after removing from the cloth.

MUTTON WITH TOMATOES.—Spread bread crumbs over the bottom of a baking dish, and place in alternate layers of mutton scraps and canned tomatoes. Season each layer with pepper, salt and bits of butter. Have tomatoes spread with bread crumbs on the top. Bake 45 minutes and serve hot.

Glass of Water at Bed Time.

The human body is constantly undergoing tissue changes. Water has the power of increasing these changes, which multiply the waste products, but at the same time they are removed by its agency, giving rise to increased appetite, which in turn provides fresh nutriment. If you do not accustom yourself to drink water regularly you are liable to have the waste products form faster than they are removed. Any obstruction to the free working of natural laws at once produces disease.

Great weakness and languor on rising in the morning are generally due to a large secretion of these waste products, and the remedy is to drink a tumblerful of water—either hot or cold—just before retiring. This materially assists the process during the night, and leaves the tissues fresh and strong, ready for the active work of the next day.

Swansdown may be cleaned by washing it in a warm soap lather. Then rinse it in cold water with a little blue in it, shake well, and hang up to dry.

Thos. Johnston, Boissevain, Man., Jan. 12, 1901:—"I consider The Nor-West Farmer the best paper that comes into our home, that is for practical knowledge in connection with the farm. We take quite a few other papers, but The Farmer is the one that is most in demand."

Mistakes of Women.

One of the mistakes of women is in not knowing how to eat. If a man is not to be fed when she is, she thinks a cup of tea and anything handy is good enough. If she needs to save money she does it at the butcher's cost. If she is busy she will not waste time in eating. If she is unhappy she goes without food. A man eats if the sheriff is at the door, if his work drives, if the undertaker interrupts, and he is right. A woman will choose ice-cream instead of beefsteak, and a man will not.

Another of her mistakes is in not knowing how to rest. If she is tired, she may sit down, but she will darn stockings, crochet shawls, embroider doilies. She doesn't know that hard work tires. If she is exhausted she will write letters, figure her accounts, or read up for some circle or club. She would laugh at you if you hinted that reading or writing could fail to rest her. All over the country women's hospitals flourish because women do not know how to rest.

Another mistake on the list is their constant worrying. Worry and hurry are their enemies, and yet they hug them to their bosoms. Women cross bridges before they come to them, and even build bridges. They imagine misfortune and run out to meet it.

Women are not jolly enough. They make too serious a business of life, and laugh at its little humors too seldom. Men can stop in the midst of perplexities and have a hearty laugh. And it

A Strange Courtship.

A young gentleman, happening to sit in a church in a pew adjoining one in which sat a young lady for whom he conceived a sudden and violent passion was desirous of entering into a courtship on the spot; but the place not being suitable for a formal declaration, the case suggested the following plan:

He politely handed his fair neighbor a Bible opened with a pin stuck in the following text:

Second Epistle of John, verse 5th, "And now I beseech thee, lady, not as though I wrote a new commandment unto thee, but that which we had from the beginning, that we love one another."

She returned it, pointing to the Book of Ruth, verse 10th, of chapter 2:

"Then she fell on her face and bowed herself to the ground, and said to him:

"Why have I found grace in thine eyes, seeing that I am a stranger?"

He returned the book, pointing to the 12th verse of the Second Epistle of John:

"Having many things to write unto you, I would not write with pen and ink, but I trust shortly to come unto you and speak face to face, that our joy may be full."

From the above interview a marriage took place the ensuing week.

Roht. Marsden, Pheasant Forks, Assa., Jan. 8, 1901:—"We have enjoyed reading The Nor-West Farmer during the past year."



Farm Home of Birch Bros., Hun's Valley, Man.

keeps them young. Women cannot, and that is one reason why they fade so early; there are other reasons, but we will pass them now. Worry not only wrinkles the face, but it wrinkles and withers the mind. Have a hearty laugh once in a while; it is a good antiseptic and will purify the mental atmosphere, drive away evil imaginings, bad tempers and other ills.—*Buffalo Times.*

Domestic Happiness.

The greatest secret of domestic happiness lies in husband and wife pleasing each other. It is quite as easy to say pleasant, graceful things as disagreeable ones. It is far sweeter to a wife to have tender words from her husband than it was to have them from him before marriage—husband in the role of lever has a double value in a wife's estimation. It pleases a woman to know her husband says pleasant things to her because he means them, and not as flattery. Flattery never pleases her. It pleases her to be told by him that he needs her—that his happiness depends upon her companionship. To feel that her efforts to please are successful and are appreciated accordingly, will stimulate most women to greater endeavor.

J. H. Drayson, Neepawa, Jan. 10, 1901:—"I think The Nor-West Farmer the best paper that a farmer can take, for it is so instructive for the young as well as old, and keeps advancing with scientific resource, which I think ought to be in every home in Canada."

A. M. Nishet, Innisfail, Alta., Jan. 7, 1901:—"I think The Nor-West Farmer an excellent farm and stock journal. Have found many helpful hints in nearly every issue."

Jas. Halstead, Maple Creek, Assa., Jan. 15, 1901:—"I find that I can hardly do without The Nor-West Farmer now, as it is brimful of valuable information for the farmer and rancher. I consider it the cheapest dollar's worth in the country."

Joseph Phillips, Edmonton, Alta., Jan. 9, 1901:—"Please send The Farmer as regular as possible, as I am anxious to receive it. I feel well pleased with it during the last year. Always keep sending it till notified to stop, whether subscription is paid up to date or not, for I am sure to send the dollar as soon as convenient to me."

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Women in Old Egypt.

In Ancient Egypt monogamy was practiced, although it was not enjoined by law. There is no evidence of the existence of a marriage ceremony, but the marriage contract secured to the wife certain rights, one of which was that of complete control over her husband, who promised to yield her implicit obedience! Nearness of relationship was no barrier to wedlock, the union of brother and sister being quite common.

Women, both married and unmarried, participated with the men in all the pleasures of social intercourse. They took part in the public festivals, shared in banquets, drove out in their chariots, and made pleasure excursions on the Nile. At banquets the guests were entertained chiefly with music and dancing. Singing was also an esteemed accompaniment, and the more solemn part of their education must have been attended to, as women often held important offices in the priesthood. They presided at births and officiated as mourners at deaths and burials.

Ladies of rank occupied their spare moments in embroidery and in the cultivation of flowers, of which they were passionately fond, and which were lavishly used on all festive occasions. Women of the humbler classes were employed in spinning, and in the rural districts in tending cattle and sheep, and in carrying water—the heavier work being left to the men.

This halcyon state of affairs lasted only during the days of Egypt's greatness during the period of her decline her daughters were fearfully downtrodden and degraded. The hardest manual labor was assigned to them, and they suffered cruel punishments for the crimes of their fathers, husbands or brothers, as the case might be. Sometimes they were publicly beaten with sticks, at others thrown into dungeons, or sent to work at the mines, where the miseries they endured were so great that, as the old historian tells us, they longed for death as far preferable to life.—Review.

Make Life Miserable.

It's the Little Things That Do So.

How frequently you hear people complain of "only a slight case of piles," often claiming that the trouble is merely temporary, induced by costiveness, or sedentary habits.

It may be some satisfaction to console yourself in this way, but it is much better to check the trouble at once. You can't do it too soon.

In time these little rectal tumors will grow from the size of a grape seed, until a knot of them results as large as pigeon's eggs.

These become inflamed and tender to the touch and causing itching, stinging and throbbing pain.

Thus the disease continues from bad to worse until the patient can bear the annoyance no longer.

The Pyramid Pile Cure is a perfectly safe and certain cure for piles in any of these stages. It goes to the very source of the trouble and drives out all inflammation, causing the tumors to subside and the membranes to resume their normal, healthy condition.

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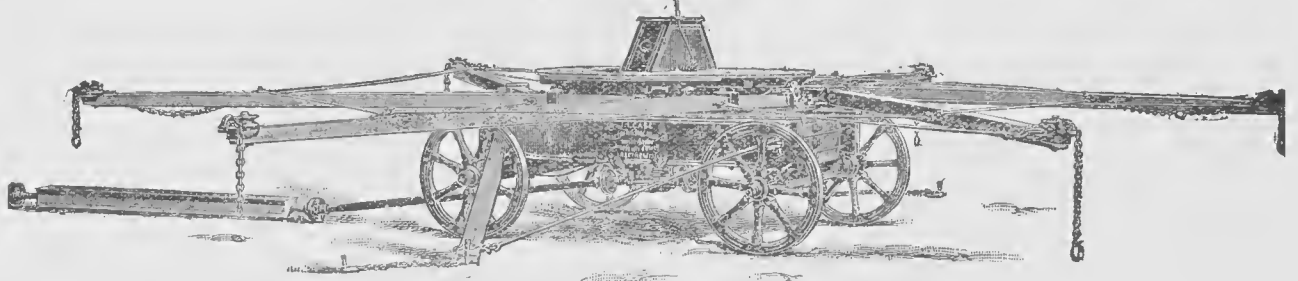
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Sham Nests.

Many people have seen the marsh wren, without suspecting at all its cunning habits of nest-building. Last summer while rowing with some friends on the Calumet river near the southern end of Lake Michigan, my attention was attracted by numbers of these birds in the marshes on either side; a little russet bird with a harsh song sometimes delivered on the wing as it hovered for a moment above the dense marsh grass, or else uttered while at rest amid the sedges. Let us find the nest. I said, for it has a curious habit of building a little village of nests, only one of which it occupies. As we rowed slowly along near the edge of the marsh we scanned the tall grass for the signs. Several times we thought we had discovered it, but were disappointed, till finally, some denser spots than usual attracting our attention, we pushed the boat a few yards into the marsh, and there were the cunning little structures woven into the grass a foot or more above the sluggish water; not one merely, but five or six of them, only a few feet apart.

Only one of the nests was real; all the rest were sham nests, the result apparently of the mere bubbling over and superabundance of the domestic instinct on the part of the male. He was such a happy and whole-hearted husband and father that he would doubtless have filled all these structures with his progeny. Or was it a rude attempt at concealing the genuine nest, by surrounding it with so many sham nests? The first, second, and third we tried were counterfeits; then a structure a little more elaborate than the others, with a little dry grass showing in it, was examined, and found to hold the eggs. One could just feel them by pressing the finger into the little opening at the

Mary had a little lamb,

She called it "Darling Ike,"

And when it grew to be a sheep

She swapped it for a bike.

* * *

Mary had a little lamb,

'Twas long, long years ago.

It lived until a ripe old age

And this is how I know.

At dinner yesterday upon

Some "spring lamb" I was fed,

I knew straightway I tackled it,

That Mary's lamb was dead.

"Didn't you feel dreadfully when you lost your gold-headed umbrella?"

"No; I'd expected to lose it for so long that I was glad when it was gone."

John Harvey, Maple Creek, Assa., Jan. 11, 1901:—"I may say I have taken The Nor'-West Farmer almost from its first issue and have never known a paper to keep up with, or one might almost say, be in advance of the times as The Nor'-West Farmer has, until it has become by all odds the best paper of its kind in Canada."



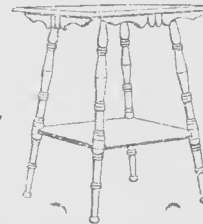
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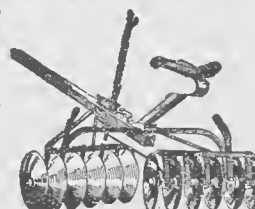
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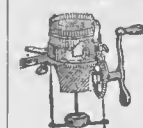
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